



ONE WORLD CALENDAR FOR ONE WORLD

VOL. XXIV

APRIL 1954

No. 1

"The past brings us many gifts: indeed, all that we have today of culture, civilization, science or knowledge of some aspects of the truth, is a gift of the distant or recent past to us. It is right that we acknowledge our obligation to the past. But the past does not exhaust our duty or obligation. We owe a duty to the future also, and perhaps that obligation is even greater than the one we owe to the past. For the past is passed and done with, we cannot change it; the future is yet to come, and perhaps we may be able to shape it a little. . . ."—JAWAHARLAL NEHRU.

IT is a strange deviation from the normal that two nations as progressive and enlightened as the United States and Great Britain should oppose the international consideration of such a reasonable and scientific matter as the improvement of the calendar.

Yet this was their position at the December first meeting of the Economic and Social Council. Their attitude was defeated by a 12 to 2 vote.

India regards calendar reform as an urgent matter; so do several other important countries, including the South American bloc. The British and American delegations, embarrassed by a campaign of opposition from two minor religious groups of extremely orthodox Jews and Seventh-Day Adventists, would like to bypass the subject as though it didn't exist.

Supporters of calendar reform at the United Nations maintain that calendar reform is a civil question, unconnected with religion. The supporting nations include 12 Christian countries (of which seven are predominantly Roman Catholic and one Eastern Orthodox), four Mohammedan countries, one Taoist-Buddhist, and one Hindu-Mohammedan. Obviously this is no forum for the solving of such religious questions as the stabilization of the Christian Easter, or the wandering character of the Moslem pilgrimage season, or the variant eras of Hindu religious calendars. Religious questions, then, have no place in the international program of the United Nations, but must be left to the decision of the respective religious authorities. One of the inherent principles of a universal calendar must be that it is *completely* separate from religious, racial or national *bias*, uniting all peoples in a common bond of time.

Fourteen nations supported calendar reform in 1937, when the League of

Nations submitted the question to all governments. Three more countries added their approval in 1948—Syria, Saudi Arabia and Czechoslovakia. Additional nations which have recently indicated an affirmative attitude include India, France and possibly Russia.

There are 18 countries represented on the Economic and Social Council, with membership changing somewhat from year to year. At the Geneva meeting next June the following 18 nations will be members: Argentina, Australia, Belgium, China, Cuba, Czechoslovakia, Ecuador, Egypt, France, India, Norway, Pakistan, Turkey, Russia, United Kingdom, United States, Venezuela and Yugoslavia.

The verbatim minutes of the December ECOSOC meeting are reproduced on page 4 of this issue of the *Journal*. For the further information of our readers, we are printing the following letter sent by the President of The World Calendar Association to Secretary of State John Foster Dulles:

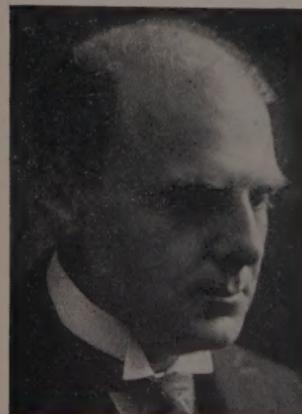
My dear Mr. Secretary: May we respectfully request a fresh survey of the attitude of the U. S. delegation at the United Nations in respect to the proposal of India for consideration of calendar reform at the 18th session of the Economic and Social Council?

The subject was placed on the provisional agenda on 1 December, by a vote of 12 to 2. Mr. Wadsworth regretted that he could not support India "because the agenda for the 18th session was already overloaded and the Council would certainly not have time to consider such a highly technical question which incidentally would call for a great deal of information and study."

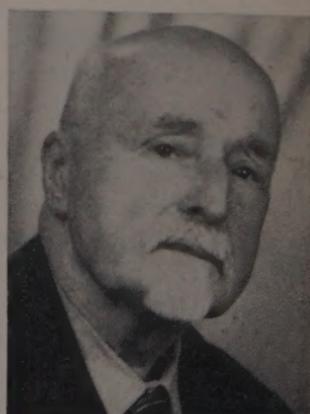
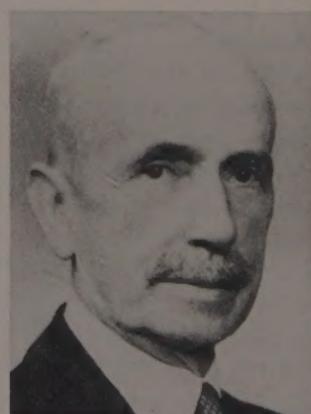
May we venture to suggest that Mr. Wadsworth had no reason to suppose that the India motion at the 18th session will require any considerable amount of time or consideration. If the India motion, for example, involves only the appointment of an ad hoc committee, it seems unreasonable to suggest that this needs prolonged debate.

Moreover, Mr. Wadsworth's statement that calendar reform is a "highly technical question" requiring "a great deal of information and study" is questionable, considering that the subject has been exhaustively studied and researched over a period of more than 25 years.

This is a subject which sooner or later should be met with something more than the camouflage of diplomatic language. If the United States delegation cannot yet take a yes or no position, it should at least stand aside and let the reasonable request by India prevail.



The late Paul-Louis Hervier, long-time head of the calendar reform movement in France; obituary on Page 20 . . . Professor A. D. Ross, chairman of the new Australian committee . . . Pasteur Jules Jézéquel of Pau, distinguished French Protestant leader; article on Page 33.



Journal of

CALENDAR REFORM

APRIL 1954

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Published by The World Calendar Association, Inc.

International Building: 630 Fifth Ave., New York 20, New York, U. S. A.

Printed in the United States of America by
CHILTON COMPANY, PRINTING DIVISION
New York • Philadelphia

OFFICIAL MINUTES OF ECOSOC

Debate on India's Motion regarding Calendar Reform, 1 December 1953

THE President invited members of the Council to consider the India delegation's request for insertion of an item "World Calendar Reform" in the provisional agenda for the Council's 18th session (Geneva, June). Mr. Jung (India) said he did not propose at this stage to enter into the substance of the item which his delegation desired to have included in the Council's agenda. He wished to stress, however, that its inclusion would not in any way prejudice the positions of members of the Council on its substance.

Mr. de Seynes (France) felt that the Indian proposal should be supported, as the question had long engaged the attention of a number of governmental organizations. He had received no instructions on the matter, but was willing not only to vote in favour but also to recommend his Government to consider what action should be taken on the proposal.

Mr. El-Tanamli (Egypt) said he would vote for the inclusion of the item proposed by the Indian delegation, for his country firmly believed in the principle that any request from a Member State for the inclusion of any item in the Council's or the General Assembly's agenda should be granted.

Mr. Rodriguez-Fabregat (Uruguay) stated that his delegation would be glad to see the Council tend to a question in which large groups in many countries, including his own, were interested.

Mr. Wadsworth (United States) regretted that he could not support the Indian delegation's request because the agenda for the eighteenth session was already overloaded and the Council would certainly not have time to consider such a highly technical question, which, incidentally, would call for a great deal of information and study.

The item entitled "World Calendar Reform" was inserted in the provisional agenda for the eighteenth session of the Council by 12 votes to 2, with 4 abstentions.

Mr. Bihin (Belgium) said that his delegation, not having received any instructions from its Government, had abstained from voting and was obliged to reserve its attitude towards the new item.

Mr. Meade (United Kingdom) said he had voted against the Indian motion for the same reasons as had been specified by the United States delegation.

Mr. Arkadyev (Union of Soviet Socialist Republics) and Mr. Alvarado (Venezuela) said they had abstained because they had not had sufficient information to be able to adopt a position.

Mr. Hsia (China) and Sir Douglas Copland (Australia) stated that they had voted in favour of the insertion of the proposed item in the agenda for the eighteenth session in the conviction that the Council would not consider the item at its eighteenth session if its agenda in fact proved to be overburdened.

UNESCO REVIEWS CALENDAR PROGRESS

From the Unesco Courier, Paris

As the official organ of the United Nations Educational, Scientific and Cultural Organization, the Courier is published monthly in English, French and Spanish. Each month it devotes a section to "an authoritative treatment of an important world problem" and shows how it is being dealt with nationally and internationally. The January issue takes up calendar reform in its historical background, leading to the current proposals of India for the international adoption of The World Calendar. Copies of this text in French and Spanish are available on request.

THIS earth on which we live is a globe, spinning around on its axis once a day, revolving in its great orbit around the sun once a year, and with the moon revolving around the earth once a month. It is not an accident, nor is it good planning, that these three motions fit so neatly into our time-scale of days, months and years. The truth is that the motions are what they are, and have been for countless millions of centuries, determined by celestial forces since long before man appeared on the earth. It takes just a day for the earth to turn once on its axis because the word was made to fit the motion. A day is defined as the length of time it takes for that rotation. So, too, the words "month" and "year" were made to express astronomical motions that man cannot alter.

Since those three independent astronomical motions are beyond human control, we must take them as they are. It is awkward that they are not related to each other in any simple numerical way. It would be much simpler if they were arranged by the decimal system, for instance, so that there were ten days in a month and a hundred days in a year. Or perhaps by the dozen, with twelve days in a month and twelve months in a year. But nothing can be done about that. The fact is that the moon makes its circuit around the earth in $29\frac{1}{2}$ days, while the earth makes a complete circuit of its orbit in close to $365\frac{1}{4}$ days. Even without the fractions, these are odd numbers and there is no simple relation between them.

That is the fundamental problem of the calendar, with which men have struggled for thousands of years.

Days must be counted and for human affairs must be arranged in some sort of order. There must be established periods for business, for the seasons and for holidays and holy days. But the day does not fit either the period of the moon or of the sun, the month or the year. Most ancient peoples in all parts of the earth originally chose the motions of the moon as the basis of a calendar, probably because the moon's motion is easier to observe. So the Babylonian and Egyptian calendars of 6,000 years ago were based on periods of the moon, and the Chinese calendar 4,000

years ago also. In ancient Greece, every month began with the full moon but the year was counted independently as 365 days.

The Romans combined the two. For them the year, of 365 days, was basic and they gave it twelve months, irregular in length, and not exactly related to the moon's motion, as we do now. Then Julius Caesar, in 45 B.C., allowed for that extra quarter-day in the true year by giving every fourth year 366 days, and thus established "leap-year." That made the "Julian calendar" which was used into modern times.

But it was not accurate enough. The year is not exactly $365\frac{1}{4}$ days long. It is 365 days, plus 5 hours, 48 minutes and 45.51 seconds. That is 11 minutes and 14.49 seconds less than $365\frac{1}{4}$ days. That is not much, but is enough to amount to 19 hours in a century and in 1,000 years to make the calendar about a week behind schedule.

This is precisely what happened under Julius Caesar's calendar. By the year 1582 A.D., the vernal equinox, when the sun begins moving northward again and so marks the first day of spring (autumn in the Southern Hemisphere), was ten days late. It came on 11 March, although the Council of Nicea of the Roman Catholic Church had decreed in 325 A.D. that it was to fall on 21 March. There was nothing to do but to correct the calendar by taking out ten days. This was logically and conscientiously done by Pope Gregory XIII. He directed that the day after 4 October, 1582, should be called 15 October. Thus the present calendar was established.

It was immediately adopted by all Roman Catholic countries but was resisted by both the Protestant and the Eastern nations. Thus for several centuries there was a difference of ten days (and later even more) in the two systems of numbering and naming the days. Great Britain and her colonies did not adopt the Gregorian calendar until 1752 and Sweden followed the next year. It was adopted by Japan in 1873, by China in 1912, by the Union of Soviet Socialist Republics in 1918, by Rumania and Greece in 1924 and by Turkey in 1927.

Simple as the change was in reality, it was very difficult to put into effect. In England there was an enormous outcry: "Give us back our eleven days!" People thought they were losing eleven days of their lives instead of merely changing the names and numbers. So too, today there are people who think they are losing an hour of life when daylight-saving time is introduced and five o'clock is called six. It is human to resist change even when it is only a change of a name or a number.

Pope Gregory made another change to give the calendar its modern form: he began the year on 1 January. Some nations had begun it on 25 December, some on 25 March, as England did, for instance, until 1752. But the numbering system had been adopted a thousand years earlier. In what we now call the sixth century A.D., a Roman abbot named Dionysius Exiguus proposed that the years should be counted from the birth of Christ. This was gradually adopted all over the world, with A.D. standing for the Latin words "Anno Domini," meaning "Year of our Lord." (Actually, modern scholars have found that Christ was probably born four years earlier than was thought in the days of Dionysius, hence in the year 4 B.C.) Thus,

after repeated changes and corrections, our calendar has come to us unchanged for almost 400 years.

How much longer will it serve? There are many reasons for improving it and few reasons for opposing any change—except the enormous inertia of habit.

Astronomically it is now correct enough; the seasons come when they should and, with the several amendments of the leap-year rule, they always will. But for human affairs, and especially for the conduct of modern business, the calendar has many awkward features.

The two halves of the year are not equal, for one thing. The first half has 181 days, the second has 184. Most people work three extra days during the second half, without extra pay. So, too, the quarters vary from 90 to 92 days, and the months from 28 to 31. The number of working days in a month (at six days a week) varies from 24 to 27. All these irregularities are unfair to someone and cause endless irregularities in statistics, such as banking figures, because months and seasons cannot properly be compared with each other.

Another serious defect of the calendar is that the first day of the month is a wanderer among the days of the week; it may be on any day from Sunday through Saturday and it will not be the same next year as this year. Thus any calendar holiday, like 25 December, may come on any day of the week while any religious holiday, such as Easter, may fall on any date in the month. There are 14 different calendars in the course of a century.

All this leads to many difficulties in setting the dates for special holidays, fairs, elections, the opening of the legislature, and other public events. In industrial countries, it would be very desirable to have such events as Christmas and the national holiday fall always on a Monday in order to give a "long weekend."

And not to be forgotten are those unfortunates who were born on 29 February—and can have a birthday celebration only once in four years. Worst of all, perhaps, is that no one can really know the calendar as he knows the alphabet. There are many who cannot remember how many days there are in any particular month, August for instance. Everyone must look to a printed calendar to keep his dates in mind. Much money and paper is wasted annually in all countries just to keep printed calendars available to everyone. In short, the calendar is complicated and irregular so that there have been many suggestions for its improvement, which have recently grown in number.

The French Revolution adopted a reform that did not last, which had twelve months of 30 days each, with three "decades," or ten-day weeks, per month. This accounts for only 360 days, so that there was a five-day holiday period before the start of the new year, which began on 22 September. Since then there have been many proposals. In 1849, Auguste Comte advocated a year of thirteen 28-day months. This takes 364 days, so that he added a single day as a year-end holiday. This calendar had the advantage that the days of the week always fell on the same dates of the month.

More recently the League of Nations examined no less than 152 different sug-

gestions for improving the calendar. One of them had a year of 73 weeks, each week having five days with every fifth day a holiday. Another had 20 months, each of three six-day weeks, with leap-weeks that had seven days five times a year. Another had a year of twelve 30-day months which were divided into five six-day weeks. After long study, the League decided that the week of seven days should not be changed and eliminated from consideration all proposals except two.

One was a calendar of thirteen months, each with 28 days. The other was a calendar of twelve months with 30 or 31 days in each, but 91 days in each quarter. Both added up to 364 days and left one day over as a special holiday. Both of them retained the seven-day week.

The second of these calendars was The World Calendar which was submitted to the League by the delegate for Chile. When submitted to the member nations, 14 were in favor of it, 6 were opposed, 7 considered it premature, and 18 made no comments. As a result, the fourteen years of study which the League gave to calendar reform ended in 1937 with a committee recommendation to the effect that "it is not expedient for the time being, to contemplate convening a Conference to carry out a reform which in present circumstances would have no chance of being accepted."

But the agitation for a better calendar had not ended. Now it is the Economic and Social Council of the United Nations which has received calendar drafts from many countries and from many international organizations. In 1947, Peru submitted the same "World Calendar" that had been considered by the League of Nations. Most recently, in October 1953, the delegation of India asked that The World Calendar be taken up at a 1954 session of the Economic and Social Council. In submitting it, the Government of India stated:

"Such a revision has been the subject of study and research on the part of experts, institutions and international organizations for many years. The consensus of opinion is that a new time system is necessary, adhering to the customary twelve months; but that it should be uniform—an invariable calendar, perpetually the same, more regular, scientific and advantageous from every point of view than the present Gregorian calendar. . . . The proposed scheme of The World Calendar has overcome the drawbacks of the present calendar. It is scientific, uniform, stable and perpetual, with but one unvarying calendar every year."

Its chief characteristics are that each of the four quarters is the same length, 91 days, and that the first day of each quarter, and therefore of each half-year and year, begins on the same day, Sunday. The first month of each quarter has 31 days and the next two have 30. It is, therefore, more like our present calendar than the other proposals that have been made. Its one defect is an inevitable one, that the year cannot be divided into seven-day weeks without one day being left over, because 52 times 7 is 364.

This one day, as in many other calendar ideas, would remain as a year-end holiday. It is proposed to call it "Worldsday" and to celebrate it throughout the world as an international holiday. The India proposal to the United Nations describes this day as dedicated "to the universal harmony and unity of mankind."

In leap years, every four years, a similar holiday would be inserted and observed between the 30th of June and the 1st of July.

Among the advantages that have been listed for this calendar are: the first day of the first month is always a Sunday; that of the second month is a Wednesday, and that of the third month is a Friday. It is a tidy arrangement. There will be five Sundays in the first month of every quarter and five Saturdays in the third month. There will be exactly 52 weekly pay days every year.

Best of all, the calendar will be permanent and in future years it will always be possible to know exactly on what day of the week any date occurred—or when it will occur in the future. It would be exactly the same in any year. Railways would not have to make up new time-schedules each year. Everyone would know that Christmas day is always on Monday. Banks and business houses would appreciate the fact that the end of every quarter falls on a Saturday so that accounts can be closed for the beginning of the new quarter. Radio and television stations would be able to count on exactly thirteen weeks in every quarter. School terms, too, would profit by being placed permanently in an unchanging calendar.

But there are objections, too. Many people will oppose the change merely because it is a change. One objection is religious, chiefly because once in every year and twice in leap-years more than six days would intervene between two successive Sabbath days. Another objection is that the calendar would be uniform and would destroy variety which is the spice of life.

Still another objection is that some persons who were born on the 31st of March, for instance, would lose their birthdays altogether, for if this calendar is adopted there will be no more thirty-first days of March, May or August. On the other hand, there would be four days on which no one has yet had a birthday because those days, 30 February, 31 April, "Worldsday" and the leap-year day, are not on the present calendar. On the other hand, persons born on 29 February would have a birthday every year. But these considerations apply only to persons born before the adoption of the new calendar. They would be forgotten after that.

The India proposal to the Economic and Social Council makes it clear why the U.N. should take up the question of calendar reform now. The present Gregorian and the proposed World Calendar coincide on Sunday, 1 January 1956, so that the change could be made at that time with a minimum of fuss, and everybody would have two years to prepare for the new calendar.

NEWS BULLETIN

DELHI.—James Avery Joyce of London, representing the British Section of The World Calendar Association, was here for a fortnight in January, conferring with government officials and national leaders regarding calendar reform. He spent considerable time with Professor M. N. Saha, scientist-chairman of the National Calendar Committee. On his return trip he stopped in Calcutta, Karachi, Cairo and Jerusalem for conferences.

REPORTS OF WORLD-WIDE PROGRESS

*By Harriet A. Lillie
Secretary-Treasurer, The World Calendar Association, International*

SUSTAINED progress toward the international enactment of calendar reform was reported at the seventh annual meeting of The World Calendar Association, International, held at the International Building in New York City on Friday, 15 January.

Countries represented at the meeting were: Argentina, Australia, Belgium, Canada, China, Cuba, France, Greece, Japan, New Zealand, Nicaragua, Norway, Panama, Peru, Philippines, Salvador, Switzerland, the United Kingdom, Uruguay and the United States. Reports were also received from India, Ireland, Germany, Brazil and other areas.

Officers of the international organization were elected as follows: President and Director General, Elisabeth Achelis; Assistant Director General, Arthur J. Hills (Canada); Vice-President, Charles S. McVeigh; Secretary-Treasurer, Harriet A. Lillie; International Liaison Officer, James Avery Joyce (England); Liaison Officer for the Far East, Professor A. D. Ross (Perth, Australia); Liaison Officer for the Arab States, Dr. Hashim Amir Ali (Hyderabad, India); Editor, Charles D. Morris.

The President, in an opening address, pointed out that the most active organizations during 1953 were India, Great Britain and Australia. In India, the calendar reform committee appointed by Prime Minister Nehru rapidly completed the first stages of its work and presented its recommendations to the government in Delhi. Its endorsement of The World Calendar and its suggestion that international action should be undertaken without delay had prompt results. The India delegation at the United Nations was instructed to place calendar reform on the agenda of the U.N. Economic and Social Council, and a motion to this effect was handed to the Secretary-General in October, accompanied by a Memorandum which began: "The ideal of the whole world is to have a logical and perpetual calendar to replace the present Gregorian Calendar, because it is widely recognized that the calendar we now use is unsatisfactory for the economic, social, educational, scientific and other activities of man. Modern progress demands the change." The 18 countries which will be members of ECOSOC at the Geneva meeting will be: Argentina, Australia, Belgium, China, Cuba, Czechoslovakia, Ecuador, Egypt, France, India, Norway, Pakistan, Turkey, Russia, United Kingdom, United States, Venezuela and Yugoslavia.

In Australia, formation of a network of state committees was completed, with a central committee in Sydney. Chairmanship of the Central Committee went to Professor A. D. Ross, head of the Pan Indian Ocean Science Association, with the Deputy Chairmanship in the hands of John K. Lavett, a prominent insurance execu-

tive. Membership in the state committees includes such distinguished names as the Archbishop of Perth; Sir Ross McDonald, former Attorney General; Sir Kerr Grant, president of the School of Mines; D. W. Brisbane, head of a newspaper chain; and the three government astronomers from Canberra, Sydney and Perth.

In England, bimonthly meetings of the British Section were held throughout the year in committee rooms of the House of Commons or the House of Lords, and activities of great variety were directed from headquarters in Buckingham Street.

Detailed reports, submitted by nearly all the affiliated organizations, included the following highlights:

Arab States and other Moslem Areas. The Moslem countries which use the lunar Mohammedan calendar include Egypt, Saudi Arabia, Pakistan, Iran, Turkey, the Asia Minor group, the North African states and considerable segments of India, Palestine, Russia and the Far East. Throughout this area the problem of international calendar reform has suddenly sprung to life during the past year. Most of the proponents of The World Calendar for adoption as a *civil calendar* in the above states do not visualize immediate replacement of the Moslem calendar for religious purposes—although the eventual possibility of such a replacement is openly discussed and frankly urged by many Moslem scholars.

During the early part of 1954, Dr. Hashim Amir Ali (Dean of Agriculture, Osmania University, Hyderabad, India), a leading Moslem authority on calendar matters, will visit many of the Arab countries and confer with statesmen and leaders, seeking their support in the calendar reform program at the United Nations. His principal stops will be: Iran, Saudi Arabia, Lebanon, Syria, Iraq, Turkey and Egypt.

Dr. Ali has been an active advocate of calendar reform for about ten years. He is a native of Hyderabad, capital of what was until recently the premier princely state in the center of India. He was educated in the United States, mainly at Cornell University, and returned to America in 1953 under a fellowship from the Fulbright and Ford Foundations. Eight years ago, as a practical calendar reformer, he initiated in Hyderabad a movement to synchronize the dates of the Fasli months with the Gregorian calendar, and finally succeeded, in 1946, in persuading the Nizam to authorize the proposed reform. His success in this far-reaching revision emboldened him, as a liberal Moslem, to analyze the problem of introducing effectively The World Calendar in the realm of the Crescent.

An enthusiastic endorsement of his efforts came this year from the Minister of Education of India, Abul Kalam Azad: "*No religious question arises against its adoption.*"

Argentina. Circulars have been distributed during the past year in support of calendar reform by the Reverend Father Juan V. Monticelli, S.S., and by Chairman Mascarenhas. The Chairman has also maintained active contact with the Foreign Ministry, which for the time being is adopting a noncommittal attitude. The Ministry is well informed on the subject, and is expected to follow the South American bloc in any international ballot.

Australia. After a year of careful preparation, the inaugural meeting of the new Australian Committee for The World Calendar was held in Sydney on 3 December. Officers were elected as follows: Chairman, Professor A. D. Ross (head of the Pan Indian Ocean Science Association), Perth; Deputy Chairman and Executive Officer, John K. Lavett (Assistant General Manager of the Commonwealth Life-Amalgamated Assurances), Sydney; Honorary Secretary-Treasurer, J. E. Marr (business systems consultant), Sydney; Public Relations Officer, R. B. Prowse, Sydney.

The program of activities approved at the December meeting included: (1) A survey of business, scientific and educational organizations to enlist their support; (2) An educational campaign through press and radio (along the lines suggested by the National Research Council) under the direction of Mr. Prowse; (3) An approach to the Federal Parliament, requesting instructions to the Australian delegation at the United Nations to support the move being made by India to legislate calendar reform at the ECOSOC

meeting in Geneva in July, 1954; (4) Organization of state committees to be completed before the end of February.

It is expected that Item No. 4 in this program will be particularly effective. Professor Ross has set an excellent model for the other states in his Western Australia committee, which includes such influential names as the Archbishop of Perth, the Directors of Education and Agriculture, the Government Astronomer, the head of the Western Australia Newspapers, the president of the Citizens Rights Association, a former president of the Chamber of Manufacturers, and the eminent lawyer Sir Ross McDonald, former Attorney General.

On 30 September the Council of the Royal Society of New South Wales supported The World Calendar and approved Mr. Lavett's plans for organization of the new Australian Committee. In October he received the approval of the Retail Traders Association, a powerful body with Commonwealth-wide membership; the Australian Council of Retailers at its annual fall meeting in Perth, passed a resolution to support The World Calendar.

At the end of December, Professor Ross left Perth on a trip to Melbourne, Sydney and Canberra, during which he planned to confer with the state committees and assist them in getting their activities under way.

The Second Pan Indian Ocean Science Congress will be held in Perth in August 1954, with Calendar Reform on the agenda as a topic for discussion and endorsement. Professor Saha of India, Chairman of the Calendar Reform Committee appointed by Nehru a year ago, has been invited to attend.

Belgium. Professor Dehalu of the University of Liège has been obliged to resign the chairmanship of the Belgian affiliate, owing to ill health. Pending the selection of a new chairman, the calendar reform situation in Belgium is satisfactory, with official assurances that the government will support The World Calendar in any international discussion of the subject.

Brazil. The cause of calendar reform has lost one of its most distinguished advocates in the death of the Brazilian Chairman, Admiral Radler de Aquino. A reorganization of the committee is expected early in 1954. In the meantime, there has been no change in the government's position, which is entirely sympathetic with calendar revision on an international plane. In fact, Brazil was the first country in the New World to advocate calendar reform, having been drawn into the subject by the French philosopher Auguste Comte more than a century ago. At the League of Nations International Conference in 1931 Brazil unequivocally approved The World Calendar; a stand which has been consistently maintained ever since. During the past twenty years, world leadership in the movement has been carried largely on the shoulders of the Latin-American countries, which will all rejoice to find at the forthcoming meetings of the U.N. that their enthusiasm has now been reinforced by the strong attitude of the government of India.

Canada. There has been no falling-off in Canada's interest in calendar reform during the year 1953. The attitude of members of the government continues favorable, and all important business and labor organizations have already endorsed the movement. The Canadian Standards Association is considering the proposals made by the International Standardization Organization to bring the subject of calendar reform into their orbit, a proposal which has already been endorsed by their French affiliate and several other groups. . . . The year has been occupied with the usual campaign of addresses and service to press and radio. An article in *Canadian Business* has proved very influential; five hundred copies were requested by the new Australian committee for circulation there. . . . Government officers in Ottawa continue to maintain a favorable attitude in international forums; unfortunately Canada is not currently represented in ECOSOC. . . . Early in the year, the Chamber of Commerce of Canada presented to the Canadian government as a "policy declaration" its request that The World Calendar should be initiated through the United Nations. . . . The Canadian section has throughout the year maintained a lively cooperative contact with London and Australia.

On 15 December the Canadian section presented a Memorandum to the Honorable Lester Pearson, Secretary of State for External Affairs, summing up the history of the calendar reform movement in Canada. It called attention to the fact that Canada was

one of the first nations to be recorded at an international meeting as favorable to revision of the calendar. This was at the League of Nations in Geneva in 1931. (Answering a question in Parliament, in February 1947, the Right Honorable Louis St. Laurent stated that Canada had supported in principle a perpetual calendar.) At the United Nations in 1949, calendar reform was placed on the provisional agenda of the General Assembly by Panama, but was removed from the agenda by a tie vote in committee. Canada was one of the four nations (with China, Chile and Venezuela) which voted to retain the subject on the agenda. Now the subject has again been put before the U.N., this time by India. Canada, it would seem, has good reason to support the request of India.

China. In Formosa (Taiwan), the Chairman of the Chinese Calendar Reform Committee, Dr. Chu Chia-hua, continues to direct an active propaganda for The World Calendar. As president of the Chinese Association for the United Nations, his influence and prestige is highly important. From the world-wide viewpoint, he suggests in his report, there is urgent need for more publications on calendar reform. Not enough has yet been done to acquaint the public with the aim we are heading for. It seems quite necessary that a series of systematic studies be made available and translated for international distribution, in order to remind all peoples that the need for such a reform is universal and that an improved calendar will benefit everybody.

Costa Rica. The Ministry of Foreign Affairs has shown a renewed interest in calendar reform. During the summer of 1953 the Foreign Minister, Fernando Lara, referred the subject to the Geographic Institute, the head of which (Dr. Federico Gutierrez) has been for many years an enthusiastic advocate of The World Calendar. On the latter's recommendation, the Minister has asked the Public Education authorities to make a formal presentation of the subject before the National University. . . . Literature in English on calendar reform is available through the daily *Libre Prensa* and the popular weekly *Mujer y Hogar*. A Spanish book on calendar reform, published recently in Panama, is displayed at the National Library by the director, Don Julian Marchena. There has lately been some favorable discussion in the press and on the radio. It is expected that the new President, José Figueres Ferrer, will take some action during the coming year.

Denmark. Informal discussions of calendar reform were held in Copenhagen during the August visit of James Avery Joyce, international liaison officer of The World Calendar Association. He conferred at some length with the government's adviser on calendar reform, who is also its UNESCO delegate and therefore fully familiar with international procedure in matters of this kind. There is not yet any organized movement in Denmark on behalf of calendar revision. The Copenhagen newspapers announced in the early summer that a prominent industrialist had made a move in that direction, initiating a correspondence with the International Standardization Organization and with the Secretariat of the United Nations. Apparently there have been no further developments in his campaign. However, qualified observers are confident that Danish delegates at this year's U.N. meetings will be sympathetic.

France. Inclusion of calendar reform in the program of the International Standardization Organization was urged at Geneva this year by its French member, AFNOR (Association Française de Normalisation). At the same time, AFNOR emphasized its position by electing The World Calendar Association to honorary membership.

Abbé Chauve-Bertrand, who for thirty years has been France's leading expert on calendar reform, has retired from active work, but will still be available from his "retreat" in southern France for consultation on important matters connected with official or ecclesiastical discussions of The World Calendar.

Throughout the year 1953 the French committee maintained a close contact with the British World Calendar Association, whose honorary secretary, James Avery Joyce, made several visits to Paris for conferences on international subjects.

Professor Joseph Girard of the Sorbonne presented calendar revision to the September Congress of the International Institute of Statistics in Rome. . . . One of the most prominent Protestant clergymen in France, Pastor J. Jézéquel of Pau, published a scholarly

treatise on calendar reform in the quarterly *L'Amitié Internationale*, organ of the Universal Alliance for World Friendship through Religion. . . . The *Christmas Annual* published by the graduates of the Ecole Boulle (decorators) is devoted to the subject of "Time," and includes a discussion and endorsement of calendar reform.

Germany. Formation of a German committee on calendar reform has been under way since November. Important leaders in industry, trade, communications, science and education have been invited to join the proposed committee. The movement has the approval of Abraham Frowein, who formerly was an eminent international leader in the cause, but who has now retired from business and organizational activity, having celebrated his 75th birthday on 19 September 1953. . . . There was a strong movement for calendar reform in Germany twenty years ago, which spread out and received part of its impetus from Dr. Rudolph Blochmann of Kiel, who unfortunately died of heart failure as a consequence of air raids in 1944; at that time the German calendar committee had an active membership of about 1,000.

Greece. Since 1937, Greece has been included among the governments which actively support calendar reform at all international meetings. The official position remains exactly as it was expressed in its communication to the League of Nations in August 1937: "The Greek government is in principle favorable to calendar reform." Coupled with this long-standing support is the declaration of the Greek Orthodox Church, dating back to 1931, when the Oecumenical Patriarchate declared itself in agreement with The World Calendar plan, a position which has been repeatedly re-stated since that time.

Haiti. An official statement from the Foreign Office in June gave information that "the important question of calendar reform is again being studied," with a view to presenting The World Calendar for endorsement by the Tenth Inter-American Conference of the Organization of American States, to be held in Caracas in the spring of 1954.

India. The positive attitude of India in regard to calendar reform culminated in October, when the government presented to the United Nations a "Memorandum on the Question of World Calendar Reform," urging that "The ideal of the whole world is to have a logical and perpetual calendar to replace the present Gregorian Calendar." The Memorandum, in six comprehensive sections, is a supporting document for the India government's motion to place The World Calendar on the agenda of the July meeting of the U.N. Economic and Social Council.

India's action at the U.N. is the direct result of recommendations made by a Calendar Reform Committee appointed by Prime Minister Nehru in 1952, under the chairmanship of the distinguished scientist, Professor M. N. Saha of the Institute of Nuclear Physics in Calcutta. The committee, after exhaustive preliminary studies, held a plenary meeting for three days in February. Its conclusions were promptly presented to the Prime Minister, and action followed without delay at the United Nations.

A program of procedure for the July meeting of ECOSOC was being planned in Delhi at the year-end, with the advisory assistance of James Avery Joyce, honorary secretary of the British Section of The World Calendar Association.

An interesting corollary to the official activities centering in Delhi was the emergence in Hyderabad of a spokesman for calendar reform among the Moslem countries. This authority, Dr. Hashim Amir Ali, dean of agriculture at Osmania University, made a trip to the United States during which he held several meetings on calendar reform—in New York, Princeton, Chicago and other cities—and conferred extensively with the headquarters officials of The World Calendar Association. His studies in the application of calendar reform to Moslem countries were reinforced from Delhi by a statement from the Minister of Education, Maulana Abul Kalam Azad, speaking on behalf of the Moslem population of India: "The universal calendar as proposed by The World Calendar Association is very useful indeed, and no religious question arises in this respect against its adoption." Dr. Ali's activities, which at the end of the year included conferences in Delhi and other important centers, will continue in 1954 with visits to Moslem countries which are neighbors of India.

Iran. Although the Moslem countries of the Middle East are in continual difficulties with the wandering lunar calendar which they adopted after the death of Mohammed, there have been few attempts to correct or revise it. In recent times, Iran is the only Moslem state where a revised calendar has actually been legislated. This was done about 30 years ago by Riza Shah Pahlevi, and his rather laborious revision is still the legal calendar of Iran. Some highly interesting discussions of this situation and its bearing on the current international movement are expected to take place in Tehran early in 1954, when Dr. Hashim Amir Ali of Osmania University (Hyderabad, India) will visit Iran. As a leading Moslem expert on calendar matters his advice will have an important bearing on the official attitude of the Iranian government. He is a supporter of The World Calendar, and regards its adoption as specially important to Moslem countries.

Ireland. The proposed Irish Association for Calendar Reform is still in process of organization, but it is already active. For the time being, it calls itself a "study group," and it is receiving considerable correspondence not only from various parts of Ireland but also from countries as distant as Australia and Egypt. The temporary secretary, Professor John J. O'Meara, writes: "Interest has increased, due partly to a series of articles published in one of the most influential newspapers. These articles were the subject of editorial comment in another paper, and there followed a general correspondence in the public press. As a result, the Dublin Rotary Club invited the secretary of the British association for calendar reform to address one of their meetings. His speech aroused a lively discussion and there were full press reports. It was decided then that a steering committee should be formed to organize an Irish association and to insure that such an organization should be truly representative of all professions and callings, including the Church, the Law, Education, Business, Civil Service and other circles."

Italy. Despite many years of quiescence due to war and postwar difficulties, the Italian National Committee on Calendar Reform still retains its identity under Professor Amedeo Giannini and his son-in-law. The latter finds a special interest in calendar reform because he is a Moslem and understands how important this movement is to the 300,000,000 people who use the lunar calendar of Mohammed. The latest brochure published by the Italian committee is more than a dozen years old, and nothing more recent is available in the Italian language. In English, however, the quarterly issues of the *Journal of Calendar Reform* have a fairly wide circulation in Italy and are found in all important libraries. Because Italy is not yet a member of the U.N., its favorable attitude toward a revised calendar is not likely to play an important part in current legislative programs.

The Italian committee received a visit in November from Dr. Hashim Amir Ali who was in Rome for a United Nations meeting. He is an educator from Hyderabad, India, and a leading Moslem authority on calendar reform. During his stay in Rome he conferred with the India Ambassador, Mr. B. R. Sen, who will probably be in charge of calendar matters for India at the July meeting of the U.N. Economic and Social Council in Geneva.

At the Vatican, calendar reform is being re-examined. According to a statement issued through the Apostolic Delegate in Washington, "the Holy See now has the question under study and will make known its conclusions in the matter at the proper moment."

Japan. The Calendar Association of Japan, with headquarters in the Osaka Municipal Planetarium, continued its activities throughout the year. It distributed widely a brochure entitled "The Main Object of the Calendar," by Dr. Churyo Noda, vice-president of the Association. Contacts were established with representatives of the Japanese Chamber of Commerce and the International Chamber of Commerce. In another series of conferences, the subject of calendar reform was discussed with a committee of the Japanese Diet. There were also talks with the Standardization Department of the Japanese government in relation to inquiries received from the International Standardization Organization in Geneva.

Calendar publishers from various parts of the country attended a meeting at Ohmi

Shrine, near Kyoto, on 28 June, and organized a Calendar Study Association which includes in its membership several representatives of the calendar reform movement.

A member of the Japanese committee, Mr. Sadanobu Inoue, returned from a visit to the United States, during which he conferred several times with the officers of The World Calendar Association in New York City. His return was the occasion for a special meeting at the Osaka Planetarium, where he reported on his trip and projected interesting photographs he had taken.

It is the conviction of the Japanese Association that public opinion is increasingly informed regarding calendar reform, and that both people and government are generally favorable to the aims of The World Calendar Association.

New Zealand. Dr. I. L. Thomsen of the Carter Observatory in Wellington is preparing a series of newspaper articles for the New Zealand newspapers on the subject of calendar reform. Both in press circles and in official channels, the articles written during the year by the British Astronomer Royal have been widely circulated and have had an important influence, augmented by the good news from India and the sustained activities of the British World Calendar Association.

Nicaragua. Four lectures on calendar reform were delivered at the National University by the Vice-Rector, Dr. José H. Montalvan, as follows: 18 April: Need for a New Calendar; 16 September: Fundamentals for the Adoption of a Revised Calendar; 22 October: Inconveniences of the Present Calendar; 18 November: Progress Toward Adoption of a More Stable Calendar. . . . Dr. Montalvan also formally delivered to the government of Nicaragua a request that it instruct its U.N. delegation to support the action of India at the ECOSOC meeting in Geneva.

Norway. Members of the Norwegian Parliament and other leaders received this year a formal presentation of calendar reform in a brochure printed by the Norwegian affiliate. Its purpose was to bring them up to date on a project which they have always supported in international conferences on the subject. Several of the Norwegian newspapers commented on the matter and gave considerable important space to The World Calendar. . . . The professor of astronomy at the University of Oslo has shown a renewed interest in the subject of the calendar and has been in correspondence with the committee.

Panama. Dr. Juan Rivera Reyes, President of The World Calendar Association of Panama, was in New York in October, as Panama delegate to the United Nations General Assembly. He made one of the important speeches of the month, dealing exhaustively with the question of charter revision. During his stay in New York City, he had several conferences on calendar reform, and discussed the subject with members of other delegations from the viewpoint of practical legislative processes. In these matters, he cooperated effectively with James Avery Joyce of London, liaison officer of The World Calendar Association. The official attitude of the Panama government in favor of calendar revision is long established and will continue in any forum where the subject is raised.

Peru. In Lima, the Peruvian committee has kept in touch with the Ministry of Foreign Relations, and has also contacted all other South American and Central American committees with a view to cooperation in presenting The World Calendar at the coming conference of Inter-American States at Caracas, as well as in the procedures at the United Nations. Peru has been a consistent supporter of The World Calendar in international gatherings for the past fifteen years.

Philippines. Active educational work has been done throughout the year by the Philippine committee, with special emphasis on religious contacts, which are very important in this country. Many inquiries have been received and answered as to the precise status of the proposed calendar reform in the United Nations. The daughter of the chairman, Ramon Caro, Miss Isabel Caro, visited New York City in the early autumn and had a pleasant discussion of the world situation with officers of The World Calendar Association.

Russia. The first official expression of support for calendar reform from the U.S.S.R. came in July at the Geneva meeting of the International Standardization Organization.

One of the subjects for discussion at these sessions was The World Calendar, on which the principal speaker was James Avery Joyce of London. Mr. Joyce's remarks, dealing with reasons for placing calendar standardization on the regular program of the I.S.O., were followed by an approving speech from the Russian delegate, M. Igkourakov. Indications that his attitude had official sanction appeared a few days later in the Soviet newspapers *Pravda* and *Izvestia*. There was further confirmation at the United Nations in November, when the Russian delegates discussed the matter informally with representatives of India, England and the United States. . . . An American authority on Russian affairs made this comment: "Russia is interested in calendar reform for practical reasons of her own. Great stress is placed by Soviet economics today upon improved planning and statistical services, and in studying the problems of economic planning the Russians have probably found calendar reform advantageous. A combination of factors appears to have swung Russia into the growing list of supporters of calendar reform. Whether the Soviet will go beyond its present cautious endorsement of study of The World Calendar proposal remains to be seen."

Sweden. There have been increased activities regarding calendar reform in Sweden during 1953. These have centered around the interest shown in the subject by Dr. Hilding Törnebohm, head of SKF, the Swedish Ball Bearing Company. Early in the year, Dr. Törnebohm gave a lecture at a Rotary meeting in Gothenburg. This received wide comment in the press. About the same time a comprehensive "Appeal to Parliamentarians" was distributed to members of the Diet, editors, educators and industrialists. In August Mr. James Avery Joyce of London, representing the British Section of The World Calendar Association, spent several days in Stockholm and conferred particularly with Mr. Thore Petersson of the Ministry of Education. It is this Ministry which in Sweden deals with calendar matters, in liaison with the Ministry of Commerce. Mr. Petersson is the chief Swedish delegate to UNESCO, and will act in an advisory capacity on calendar matters with the Swedish delegation at ECOSOC. He is well informed on all phases of calendar reform, and sympathetic with the proposed international action.

Switzerland. Geneva was the scene of many international conferences during 1953. At several of these, The World Calendar Association was represented and the cause of calendar revision was presented. Perhaps the most important, from this viewpoint, was the meeting of the Council of ISO (International Organization for Standardization), which is considering the motion of its French member to place "standardization of the calendar" on its regular program of activities. A questionnaire on this motion has been sent to all its members, but insufficient replies have thus far reached the secretariat to enable a firm conclusion. The Council meeting was addressed by James Avery Joyce, international liaison officer of The World Calendar Association, and his appeal for a standardized calendar was supported by strong statements from the French delegate and from the representative of Soviet Russia. Mr. Joyce also attended meetings of the U.N. Conference of Non-Governmental Organizations and of ECOSOC, the Economic and Social Council of the U.N., with its numerous committees and sub-committees. . . . An important Swiss business magazine, *Der Organisator*, published an informative article on calendar reform.

Turkey. Dr. Hashim Amir Ali of India, leading Moslem proponent of calendar reform, stopped over briefly in Istanbul in November on a trip which included similar stops in Beirut, Baghdad and Tehran. In each of these cities, he laid the ground for more extended visits early in 1954, when he will confer on calendar questions with groups of Moslem leaders from each country—Turkey, Lebanon, Syria, Iraq and Iran.

United Kingdom. The British Section of The World Calendar Association celebrated its first anniversary on 5 May 1953, at a meeting in Committee Room No. 12 of the House of Commons. The presiding officer was Lord Merthyr and the principal addresses were by Peter Freeman, M.P., and James Avery Joyce. Mr. Freeman discussed the entry of India into the international crusade for an improved calendar. He is one of the leading parliamentary experts on India, for many years head of the India League and author of a standard book, *Our Duty to India*. He said in part: "Calendar complica-

tions are an old story in India, which currently has more than thirty different calendrical systems in active use—a situation which is chaotic and intolerable. This is one of the numerous national problems which Prime Minister Nehru has undertaken to solve, and he proposes to do it on an international basis, by moving at the United Nations for world adoption of The World Calendar."

Mr. Joyce's address was an historical sketch of the development of calendar reform on the international level during the past forty years. One of the pioneer bodies seeking international action was the International Chamber of Commerce, which began hammering at this subject during its London session in 1910. It continued its campaign at the Boston Congress in 1912, and at Liège in 1914 it passed emphatic resolutions urging a revised calendar. After World War I it continued its crusade at the London conferences in 1921, demanding that governments convene an international congress to study the subject. Again in 1923 at Rome, in 1925 at Brussels and in 1929 at Amsterdam, the International Chamber called on the League of Nations to set up the necessary machinery for dealing with calendar revision. Its twenty-year campaign, reinforced by similarly urgent demands from bodies like the International Astronomical Union, resulted in the 1931 conference called by the League of Nations, after a great deal of preliminary research by the League's Committee of Enquiry. Subsequent activities included the initiative taken by the International Labor Organization in 1936 and 1937, when a draft convention in support of The World Calendar actually received the favorable votes of 14 governments. All this groundwork led to the present status of calendar reform at the U.N. As Trygve Lie said in his 1947 report: "The 14 years of work by the League of Nations on calendar reform achieved considerable results. Although originally there were several hundred proposals for revision, two main types were eventually isolated, and finally one single calendar was submitted to the Council for approval."

Mr. Joyce summed up the results of his visit to the U.N. in New York with these words: "I think I am justified in predicting action shortly. At the General Assembly meetings I found a surprisingly solid backing among a large number of delegations, favoring the inclusion of this item on the official agenda. In my considered opinion it will not be long before the moment arrives when this important step will be taken."

Five other meetings were held during the year, all of them taking place in the House of Lords committee rooms. They were called for January, March, May, July and December. The latter meeting occurred after Mr. Joyce's return from another visit to the United Nations, and at this time, the action of India justified fully the predictions which Mr. Joyce had made in May.

In the meantime, Mr. Joyce had attended as an official observer several important international meetings in Geneva, Paris, Copenhagen and Stockholm. These included the sessions of the U.N. Economic and Social Council, the Congress of U.N. Non-Governmental Organizations, the Copenhagen Congress to consider U.N. Charter Revision and the annual Council of the International Standardization Organization.

Meanwhile the London office had taken up calendar matters with delegates to the International Chamber of Commerce convention in Vienna in May. It had also sent a representative to Dublin, to assist in the organization of an Irish committee for calendar reform. It had corresponded with Australia and South Africa regarding similar new groups in those countries.

The London office supplied speakers for meetings in various parts of the British Isles. It conferred with many interested groups, representing business, education, religion and science. It sent the Astronomer Royal to New York as its representative, to speak before a scientific audience at the Hayden Planetarium and to confer informally with an important group of U.N. delegates.

The press officer of the British Section, Mr. Harold Watkins, was active with newspapers, magazines, and radio. He also found time to write a book on calendar reform, which is being published in January under the title, *Time Counts*. The British publisher is Neville-Spearman, and simultaneous publication in America will be by the Philosophical Library.

Two new members of the working committee of the British Section are Sydney Walton, a well-known writer, and S. J. Noel-Brown, industrial consultant. One of the

active committee members, J. Arthur Rodwell, was summoned to Buckingham Palace during the coronation ceremonies to receive from Her Majesty the decoration of the Order of the British Empire.

Yugoslavia. Organization of a new committee on calendar reform in Yugoslavia is being discussed, to take the place of the group which became inactive after the death of the chairman, Mr. George Curcin, several years ago. Enthusiasts in the Belgrade area include Rear Admiral Mariasevic, now living in Zemun, ten miles from the capital. At Novi Sad, fifty miles up the Danube, are Bishop Irenäus, head of the Orthodox Church, and Dr. Nikola Čgajtajevic, president of the Court of Appeals. The attitude of the Yugoslav government has been definitely favorable to calendar reform since the first League of Nations conferences in 1931. In fact, the Preparatory Committee for the 1931 meetings was presided over by a Yugoslav diplomat, M. Djouritchitch, who had as his technical adviser M. Vasa Yovanovitch of the Belgrade Chamber of Industry.

United States. The most important event of the year, from the viewpoint of international progress toward the goal of calendar reform, occurred on 6 April, when the United Nations officially registered The World Calendar Association, International, as one of the non-governmental organizations affiliated with its Economic and Social Council (ECOSOC). This formal recognition marked a new and significant step in the international pathway leading to decisive action for an improved calendar.

As one of the carefully selected non-governmental organizations known as NGOs, the Association now enjoys consultative status with the U.N. and becomes a recognized part of the U.N. operation. Under the U.N. Charter and Statutes, this consultative status is arranged "for the purpose of enabling the Council to secure expert information and advice from groups having special competence in their field, and on the other hand to enable organizations which represent important elements of public opinion to express themselves."

Since 6 April The World Calendar Association, International, has had representatives at three NGO conventions, one in Geneva and two in New York City. It has also attended various allied meetings and has been in continuous contact with the U.N. secretariat and with delegates of member nations, not only in New York and Geneva, but also in London, Paris, Stockholm, Copenhagen, Rome, etc. Its international liaison officer, James Avery Joyce, came from London to New York for the autumn sessions of the General Assembly. He also attended U.N. meetings in Switzerland and Denmark, and at the year-end was preparing to go to India for important conferences with the U.N. delegations from that country. Another member of the British Section, Sir Harold Spencer Jones (British Astronomer Royal and head of Greenwich Observatory), was in New York City at the time of the General Assembly sessions, and was the guest of the India delegation at a luncheon where calendar reform matters were discussed with delegates from England, Russia and the United States.

Dr. Ali, a Ph.D. from Cornell University and since his graduation a professor of agriculture at Osmania University (Hyderabad, India), was in the United States most of the year on grants from the Fulbright and Ford Foundations. As the leading Moslem authority in India on calendrical matters, he has for some time been engaged in an international study of the problem of introducing effectively The World Calendar in the realm of the Crescent. A summary of his views, published in the *Journal of Calendar Reform* in June, was submitted for criticism to important scholars in Moslem countries, Egypt, Iran, Iraq, Turkey, etc., with a surprisingly favorable response. During his stay in America, he attended important conventions of Arab scholars at Princeton and Chicago; on his return trip to Hyderabad, he made stops in Rome, Istanbul, Beirut, Baghdad, Tehran and Delhi for conferences with calendar groups in those cities. During the early part of 1954 he will make similar visits to Egypt, Saudi Arabia and other parts of the Moslem world.

A pleasant feature of the year's work was the completion of The World Calendar Exhibit at the Hayden Planetarium in New York City. The Exhibit was formally opened on 4 December with an address by Sir Harold Spencer Jones, the British Astronomer Royal, who made a quick round trip by air from London for this purpose, and incidentally achieved something of a world's record by appearing on eight radio and television programs

in a period of only about forty-eight hours. At a dinner preceding his lecture, a dozen prominent American scientists met to honor him and to discuss calendar reform. Astronomers, of course, have always been in the forefront of calendar matters, since the days of Babylonia, Phoenicia and Egypt.

Throughout the year the headquarters staff of the Association has been occupied with preparation of material to assist the new committees in India and Australia in their work. The excellent progress made by both committees has been an important feature of the year 1953. At the same time close contact has been kept with the affiliates in Central and South America where in many cases the situation is that expressed by the Uruguayan affiliate: "Our government has declared in favor of calendar reform; our official representatives are fully informed and ready to give full cooperation; thus we are in the position of standing by, waiting for the rest of the world to catch up."

There have been a few changes in the membership of the U. S. Advisory Committee. We have lost three important members in the deaths of Gano Dunn, eminent industrialist and engineer; Dr. Robert Millikan, famous physicist who was a Nobel Prize winner in 1923, and John J. O'Neill, Science Editor of the *New York Herald-Tribune*. In their places we have added Paul Talbot Babson, head of the United Business Service of Boston; Dr. Wagner Schlesinger, director of the Adler Planetarium in Chicago, and Q. Forrest Walker, economist for R. H. Macy & Company, New York City.

Publications activities in New York have included four issues of the *Journal of Calendar Reform*, two editions of our basic pamphlet, *Improve the Calendar*, and a dozen other pamphlets—including the first two issues of a series designed to document U.N. action.

Printed material in bulk was supplied during the year to schools, colleges, conventions and special groups of various kinds. Individual requests for information have been larger than usual. Service to press, radio and television has continued to be an important activity. Material for speakers has been distributed and the roster of speakers available for addresses before forums and clubs has been active. Mr. Edward F. Flynn of St. Paul heads the list of speakers, as usual, in the number of addresses made. Other speakers have included Allan P. Ames of Pensacola, Reverend John R. T. Hedeman of Baltimore, Commander William A. Mason of California and Jacob E. McCollly of Pennsylvania. Miss Achelis has spoken on several occasions, notably at the American Museum of Natural History in New York City and at the Astronomical Society in New Haven. In Philadelphia the Fels Planetarium gave five lectures daily throughout the month of September on the subject "The Calendar, Man's Measure of Time."

OBITUARY NOTE

PARIS.—Paul-Louis Hervier, chairman of the French World Calendar Committee, died on 8 March. One of France's most distinguished journalists, he had been the active head of the calendar reform movement in this country for nearly 25 years. Educated in France and England, he was Secretary General of the Paris *Intransigeant* during the first decade of the century, when that newspaper boasted the greatest circulation of any periodical in the world. For several years he did a daily short story for *Intransigeant* and other French newspapers, and authored several books in English and French. In World War I he served as a liaison officer with the British and American armies. His qualities of courage, integrity and common sense won him many American friends during this period. After the war, he worked with American film companies as scenarist, publicist and librettist. About 1931 he became interested in calendar reform, attending many international conferences and collaborating with Abbé Chauve-Bertrand, Senator Godart and other French leaders of this cause. During the past year he had published two successful novels.

INDIA'S CALENDAR HORIZONS

By Dr. Hashim Amir Ali, Osmania University, Hyderabad

Hyderabad, largest and most populous of the Indian states, operates under four different calendars. This article, abstracted from a monograph published in India, gives a unique philosophical view of the whole calendar situation. Dr. Ali, in 1946, initiated a successful movement for the reform of the local Fasli calendar, synchronizing it with the Gregorian system.

CALENDARS of India are as numerous as the castes, tribes and languages to be found in our vast sub-continent. Those which can be classed under the generic term "Hindu" are based on astronomical calculations of an intricate nature, and any attempt at describing them briefly is as futile as the effort to define clearly the infinitely varied patterns covered by the term Hinduism itself. Moreover, there are my own limitations of technical knowledge which make me hesitate to deal with the subject. But I shall do my best to present what I have been able to gather in a manner which will give those who do not possess it, at least a hazy idea of the subject.

The ancient Hindus are the people credited with the invention of the Zero, which constitutes the basis of all modern mathematics and astronomy. We assume also that the measurement of time, which is the function of all calendars, was carried on in India earlier than in any other country.

It has been said that the legend of Shiva and Parvathi is itself a symbolic representation of time and the calendar. Shiva, the spirit of Time, was in a coma until Parvathi, the calendar, was born.

And it was only when he was enmeshed in the charm of Parvathi that he began to dance. The loss of Parvathi and the going of Shiva into a swoon is supposed to represent a period in which the calendar was lost to the human race. These analogies can be expanded. But my purpose is served if I have conveyed some sense of the venerable traditions and philosophical attitudes which envelop time measurement in our ancient land.

Coming down from the realm of fancy to the domain of facts and figures, one cannot help noting that very early calendar beginnings are also found in other parts of the world. Take for example the various eras used in different calendars. According to the Julian reckoning this is the 6667th year; by Jewish systems it is the 5714th; according to the Kali Yuga it is the 5052d. Another grouping of eras begins at about the same time as the Christian reckoning. The Japanese era makes the current year 2614; Buddhists call it 2497; Zoroastrians say it is 2342; the Greek era makes it 2266; the Sambat calendar says it is 2011, and the Saka year is 1876.

It is only the last two reckonings that concern citizens of Hyderabad, and my mention of the others has, I hope, served

to place these in proper perspective. What I wish to emphasize is that while the principles involved in Hindu calendars are of great antiquity, the eras themselves are not very old as eras go.

Chief characteristic of Hindu calendars, as distinguished from others, is their infinite intricacy. The basis of this intricacy is three-fold: First, the learned and philosophical Brahmins,* responsible for these calendars, seem to have had a passion for reconciling the irreconcilable. Second, they had only mathematicians and astronomers, and not laymen, in mind: the calendars of the Brahmins, in other words, were made by the Brahmins for the Brahmins. Third, they attempted to make the calendar such as to serve astrological purposes—an other means by which their own indispensability for others could be established.

No one can deny that all Nature is based upon a single universal plan, and this hypothesis is sufficient for all theoretical purposes. Man's knowledge can never expand to the extent that it can reconcile completely divergent phenomena. To illustrate what I mean let me give a simple example. If only the earth could complete a cycle round the sun in exactly 360 days, how simple would calendar making become! It is those extra 5 days, 5 hours, 48 minutes and 46 seconds which have been giving the headache to humanity ever since it began to measure the length of the year. Now the solution adopted by the Europeans 2,000 years ago was one that any layman

could follow without the help of astronomy. They gave to each year 365 days and added an extra day every four years—in other words, they assumed the year to measure 365 days 6 hours. This arrangement served all practical purposes for 1,600 years. When the extra minutes and seconds accumulated to a stage of inconvenience, Europe made another change prescribing the omission of a leap year every 100 years. And this has postponed any appreciable divergence for several thousand years. In other words, Europe had the common man in view and an organization to enforce a change.

The Brahmins of India did nothing so simple. Their year had to correspond exactly with the full cycle of the sun starting at a fixed point and returning to it. And since such a fixed point had to be decided upon they took the help of the stars. So much so that their so-called solar calendar became, in fact, a sidereal calendar.

Similarly, they were not satisfied with dividing the solar year into twelve more or less arbitrary periods of 30 days and 31 days. Their "months" had to be exactly equal to the period which the sun takes to pass through each of the twelve divisions into which the Babylonians had divided the heavens—these solar "months" thereby extending to 29 days in some cases, 30 in others and even 32 in one month. Even their "day" could not begin at sunset or sunrise or noon or midnight. It had to begin or end precisely at the moment when the exact fraction of the year closed whether it was at 9:45 a.m. or 2:47 p.m.

To come down to less perplexing statements, however, it might be said that there are mainly two types of Hindu cal-

*The Brahmins constitute the highest or sacerdotal caste among the Hindus, whose chief duty is the teaching of the Vedas and the performance of religious ceremonies.

endars—one based on the changing relations between the earth, sun and stars, the other taking into consideration the phases of the moon also. The latter, however, has gained so much acceptance that, except in Bengal, the purely solar reckoning serves mostly as a background for the luni-solar calendars which underlie the *Sambat* era, more common in North India, and the *Shaka* era current in the South.

The "month" in the luni-solar calendar is naturally the period between two new moons. But this "new moon" is not the delicate crescent which Muslims strain their eyes to see. That would give rise to too crude a calculation. In the Hindu calendar "New Moon" means the exact moment when sun and moon have the same longitude, a somewhat abstruse phenomenon which takes place at some moment in the middle of the entirely moonless night. This period between new moon and new moon, covering about $29\frac{1}{2}$ days, is divided exactly into 30 divisions of time known as *tithis*. The duration of each *tithi* therefore is slightly less than a day of 24 hours. The "dates" shown in Hindu calendars are thus not the serial numbers of days as we understand them but the serial numbers of these *tithis* and represent the one current at sunrise. In other words a "date" shown in the Hindu calendar does not necessarily extend to the next sunset or sunrise. It may even happen that, at the time of a consecutive sunrise, not the next but the *tithi* following the next is current. In such cases a single day is found to have two *tithis* or "dates" marked against it.

The same principle of occasionally taking two steps against the other's one is

observed in making the shorter lunar year keep pace with the longer solar year. The mean duration of a lunar month is about $29\frac{1}{2}$ days and hence lunar months consist of 29 or 30 days. A lunar year of twelve lunations is about 11 days short of the solar year. Therefore, whenever two new moons occur within the time space of a single solar month, the lunar month, beginning with the first of these new moons, is regarded as the extra month termed *adhika*, while the month beginning with the second of the new moons is regarded as the *nija* or real month. Hindu festivals are always observed in the *nija* month.

One other item given in our calendars, the *karti*, needs some explanation. Long before the Hindus borrowed the twelve divisions of the Zodiac from the Babylonians they had themselves classified the heavens into 27 divisions, each one measuring $13^{\circ} 20'$. For the purpose of astrology they had been mostly concerned with the passing of the moon through these 27 divisions which they called *nakshatras* and their almanacs still show in which of these *nakshatras* the moon is at each sunrise. The period taken by the sun to pass through each of these 27 *nakshatras*, or divisions of the ecliptic, is known as the *karti*. Dividing the solar year into 27 instead of twelve divisions as the months do, the system provides a more accurate description of the seasons. For example the entry of the sun in the *Rohini Karti*, is at once accompanied with southern winds and its entry into the *Mrigasira* announces the *Mirag* or breaking of the monsoon.

The above explanation is the simplest that I can give and those already conversant with the systems have probably

been able to follow it. But I dare not hope that I have made myself quite clear, simply because the subject involves too many fractions and details.

But let me not leave the impression that these attempts on the part of the Brahmins of old to reconcile the seemingly irreconcilable have been futile. Our knowledge of the universe might have been much less than what it is now if they had been satisfied with what merely served practical purposes. We might grumble at the difficulty in understanding them, but there can be no doubt that, from the point of view of correctness and exactitude, the Hindu calendars are by far the nearest approaches to the actual machinery of astronomical phenomena governing life on our planet. The only fault of the Hindu calendars is that they are unintelligible to the common man.

THE "CHRISTIAN" CALENDAR

The so-called Christian calendar has exactly the opposite characteristics of those which I have described in dealing with the Hindu calendar. It is not without inconsistencies and divergencies from Nature and yet it has managed to muddle its way to each and every corner of the globe merely because it was simple, intelligible and practicable to the common man. It serves all practical purposes.

The very first observation to be made regarding the Christian calendar is that it is not "Christian." It originated centuries before Christ and had its beginnings in pagan Rome and ancient China where the intercalation of a day every four years was in vogue thousands of years before the Christian era. Julius Cæsar, who really made it what it is, pre-

ceded Christ by more than two generations.

It is called the "Christian" calendar because the Christians of later centuries appropriated it for their own; and, leaving the Cæsars to the minus period "Before Christ," started a positive series of years with the year in which Christ was supposed to be born. But subsequent research has established the fact that Christ himself was born in the year which, according to the calendar already existing, was either 4 B.C. or 7 B.C. Even the date was more likely 9th December instead of 25th.

The next anachronism of the Christian calendar is with regard to its New Year. The words September, October, November and December clearly indicate that these were originally the seventh, eighth, ninth and tenth month respectively. Going backwards in this series one would have March as the first month; and that would be in keeping with the immemorial custom of beginning the year with Spring.

The answer to the question as to how the Christian year began to commence with the 1st of January is very simple. Nearly 1600 years after Christ, came the vicegerent of God on earth, known as Pope Gregory XIII. He was a very powerful Pope and he wanted the new year rejoicings to be close to the date on which the nativity of Christ was celebrated. Since the birth of Christ on the 25th of December is not an established fact he would have been wiser to have brought the Nativity celebrations closer to the vernal equinox. But the spring festival was a pagan custom and Christmas had already become associated with snow and hearth fires. So instead of changing the official birthday of Christ,

the New Year was shifted from March,* the time when all Nature rejoices, to January, a period when Nature is asleep. And Europe quietly obeyed the Pope in 1582 when the Renaissance had been preaching its gospel of intelligence and freedom for 200 years!

It is true that not all of Europe bent its knees immediately. For 200 years England resisted. But in 1752, the New Year in that country also was shifted to the end of Christmas week.

But this was not all that Pope Gregory did. His astronomers and mathematicians told him (or perhaps he himself realized as an astronomer) that owing to the addition of a day to every leap year during the preceding 1,200 years, Christmas did not correspond exactly to the winter solstice which had been fixed for it by the Council of Nicea in 325 A.D. So he proclaimed that 10 dates should be missed by calling the day immediately following the 4th of October the 15th of October. This regulation too, Christian Europe obeyed; and when England adopted the reform in 1752, the day following 2d September was given the date of 14th September. But Russia and other countries following the Greek Church resisted the change until as late as 1918.

Europe no longer worries about these arbitrary and unnecessary changes. What it does remember is the one sensible aspect of the Gregorian amendment—the provision that a day should not be added to the century year unless it were divisible by 400. It is this provision which

counteracts the excessiveness of intercalation brought about by the addition of a leap-year day regularly every fourth year. If Pope Gregory had only looked forward instead of looking backward, he would have brought forward the 1st of March, *i.e.*, the new year, to the 11th of March, which then corresponded with the vernal equinox, instead of retarding the year so that the 21st instead of the 11th March began to correspond with that phenomenon of Nature.

These incongruities of the Christian calendar have not however escaped the observation of intelligent Europeans. The following passage from *Dreams of an Astronomer* by the French scientist, Camille Flammarion (1842-1925) is a discussion of conditions on the planet Mars:

"As in our case, there is no integral number of days in the Martian year. Perhaps their calendar has also been reformed several times without being made perfect. But let us hope they are not as stupid as we, with our months of 28, 29, 30 and 31 days, and with our three kinds of days—the civil day which commences at midnight, the astronomical day which commences the next midday and the naval day which commences the previous midday; we who waited thousands of years before we could fix an exact hour in Standard Time because we counted from conventional meridians and the various countries could not agree to a single meridian. Being probably more advanced than ourselves in its planetary age, Martian humanity is most likely more reasonable and is not mixed up with the littleness of frontiers, dialects, customs and national rivalries. For a long time already, no

*This also explains why February, being the then last month, had an extra day in every leap year. Logically with this change, December should have become the month having an extra day every leap year.

doubt, they form a simple unit. One may also suppose that they do not celebrate their new year festival amid the winter frosts, but in the hopeful days of the equinox."

This realization by a Westerner is not surprising. What is surprising is that such a remonstrance is so rare among the nations who have the reins of scientific discovery in their hand and who today claim to lead the world in thought and action.

And still more surprising is the fact that even The World Calendar Association, which has been clamoring for a more rational and practical calendar, seldom says a word about having the New Year related to the vernal equinox. Inertia is, indeed, not confined to India!

I have said that the Christian calendar differs most from the Hindu calendar in that, unlike the Brahmin system, this is a calendar for the common man. Therein, I repeat, lies its strongest and weakest point. As long as it meets his daily needs, the common man does not care whether his new year has any relation with geo-physical phenomena. It is difficult to persuade him to adopt a change which he does not think essential for his routine existence. Only when the intelligence of the common man is raised to that of the Brahmins will the world have a calendar as fastidious as that of Aryavarta.

ALSO, THE MUSLIM CALENDAR

We have seen that the so-called Christian calendar is not really Christian. Something similar must be said regarding the Muslim calendar. It bears Mohammed's name and its era dates from the year of his *Hijrath* from Mecca to

Medina. But it originated five years after the great Prophet had passed away.

Its basic principle is that it is purely lunar, and the reason for this is that the Prophet at his Farewell Pilgrimage—only three months before his death—gave his followers two verses of the Koran condemning the haphazard intercalation of the thirteenth month in the existing tribal calendar. My position is that his meaning was misinterpreted, and that he really intended to suggest the adoption of the purely solar calendar which had been current among the Christians for the preceding 600 years.

This thesis, coming from a Muslim, might at first appear sacrilegious. But many intelligent and orthodox Muslims agree with me that the purely lunar Hijri calendar does not constitute a tenet of Islam and that there is no reason why its authenticity being questioned should be regarded as a criticism of Islam—the universal code for human life and action as enunciated through the great Arabian Prophet.

"There is no God but God and Mohammed is His Prophet." The implicit faith in this simple creed is enough, I believe, to make one both a Muslim and a striver after good. It is not necessary for a Muslim to add that "The lunar calendar is the only true calendar" or that "I believe in the Hijri calendar."

We all know that the Hijri calendar is based purely on the phases of the moon—the period between the appearance of one new moon and another being regarded as a month; and twelve such lunations as a year. This involves no calculation of any intricacy as in the luni-solar calendars of the Hindus; nor is it even necessary to remember the

number of days in each month by memorizing such stanzas as "Thirty days hath September." It is simpler than *A B C* and was entirely suitable for the illiterate Bedouins who had only to look at the clear sky of the desert at night to know the approximate date.

If only a year could consist of exactly twelve such lunations, this calendar would have been perfect. But, unfortunately, God did not ordain it that way and life on our planet, being guided as it is by the nucleus of our solar system, namely, the sun, refuses to be affected in any real sense by the moon, which is a satellite of the earth. The lunar year, as we all know, is entirely oblivious of the seasons and of the "year" observed by all Nature. And we have seen how others have taken advantage of both the sun and moon by adding a thirteenth month sometimes after two and sometimes after three years.

Now the fact that the month names of the Hijri calendar, *Moharram*, *Safar*, etc., existed even before the advent of the Arabian Prophet gives one the wrong impression that this purely lunar calendar of Islam existed also among the pre-Islamic Arabs from time immemorial. But the very names of these months suggest that they belonged not to a lunar but to a solar calendar or at least to one that was luni-solar. For example, the name *Ramazan* is derived from a word signifying intense heat, the word *Rajab* is connected with the harvest season for dates when their inflorescence had to be supported by forks stuck in the ground; *Rabi*, the word denoting the names of two months, is a common seasonal term even now. The word *Jamadi* signifies a season of stillness, and *Safar* is the month before the next growing season.

To suppose that any people, however ignorant, gave these names to purely lunar months when they knew full well that they would not correspond with the seasons signified by them the very next year, is to deny all logic in arriving at conclusions. No, these names prove beyond doubt that, whether the months actually continued to correspond to the seasons or not, they were intended to do so at the time the names were given. The beginning of each month with the new moon being also an established fact there is no alternative but to accept the thesis that the calendar of the pre-Islamic Arabs could not but have been a luni-solar calendar very much like, but not exactly the same as, the Jewish or Hindu calendars which still persist.

Going back from our own times to the time of the Prophet, in regular succession of the twelve lunar months, leads one, however, to the conclusion that *Ramazan*, signifying heat, corresponded with the cold season more or less throughout the 23 years of the Prophet's mission. This anomaly is explained by scholars as the outcome of the Arabs' habit of adding an intercalary month *regularly* every three years, a process which made the difference of a day every year and of six months in nearly 200 years. It was thus that the month, having a mid-summer connotation, gradually moved, through a slow evolutionary process, to fall in mid-winter. The evidence supporting this thesis is, at the moment, undeniable. But, somehow, I cannot make myself believe that a people who were sufficiently advanced to adopt intercalation could have been so stupid as to suffer this gradual and by no means imperceptible change. My own theory, which I hope one day to

support with evidence, is that the transposition of a mid-summer month to mid-winter was probably the outcome of a sudden change of the month of Hajj from the autumn to the spring and the consequent juxtaposition of the two halves constituting the Arab year.*

Be that as it may, the point we are concerned with here is that until the last year of the Prophet's life the lunar months continued to correspond more or less with the seasons because of the prevailing practice of intercalating a month every two or three years.

Unfortunately, another cultural pattern of the Arabs was interwoven with this practice of *Naci* or intercalation. This was the custom of regarding four out of the twelve as sacred months in which no war or plunder was allowed. The first of these four months was *Rajab*, which came in the part of the year when the harvests were ready and when plunder would be both uncalled for on the part of the plunderers and highly disastrous to those plundered. The other three months were grouped round the *Hajj*, a quasi-religious festival providing also for exchange of goods and the hearing of tribal disputes. To avoid quarrels on the way to Mecca, during the festival or while returning from the *Hajj*, a time when all were carrying goods and feelings also ran high, Arab society had made warfare unlawful in the months of *Zulqada*, *Zulhajj* and *Moharram*.

*Dr. M. Hamidullah, of the Osmania University, on reading this paper in manuscript, tells me that it is even possible, though not likely, that such a transposition took place during the brief all-round sway of the Fatimide dynasty which was notorious for its unorthodoxy. Like many other notable incidents in history, it is not impossible that the record of this also was lost in oblivion.

Unfortunately, the last two of these months, *Zulhajj* and *Moharram* were also involved in the system of intercalation—*Zulhajj* being the last month of the year which had to be repeated every two or three years, and *Moharram*, which had consequently to be pushed forward on every such occasion. Naturally, the problem often arose as to whether *Moharram* at such times was really sacred or not when a month after *Zulhajj* had already intervened. And this had always given the *agents provocateurs* an opportunity to lay the blame on those responsible for intercalation. Whenever the *Naci* occurred there were sure to be war and bloodshed.

During the 23 years of his mission, the Prophet of God had discouraged bloodshed except in self-defense. When, finally, after years of striving, he had succeeded in introducing order out of chaos, the two verses which are alleged to condemn and prohibit the practice of *Naci* (intercalation) were revealed during the last pilgrimage.

In these verses, great emphasis is laid on the fact that *the year of God* has always consisted of twelve months, thereby implying that the calendar involving the *thirteenth* month of intercalation is the cause of confusion and conflict and hence should be abandoned. The text lays much emphasis on the *twelve months* constituting *the year of Nature and of God*. Now twelve *lunations* as I have shown, do not cover the year of Nature and of God, so it is logical to assume that the verses suggest the adoption of a *solar calendar* in which the twelve months do conform to the laws of God.

Students of the Koran know that all the Prophet's injunctions regarding slav-

ery, drink, fasting and prayer were given first as hints and repeated gradually in plainer and more definite commands. The great Prophet passed away within three months after the Farewell Pilgrimage in which his utterance regarding the *Naci* had been made; and since the problem of *Naci* arose only once every two or three years, no occasion arose during this period for the amplification of his hint.

The purely lunar calendar became current in the Islamic camp during the period of turmoil and conquest following the Prophet's death. Intercalation of the thirteenth month had been condemned and so this intercalation was given up. But the fact that dispensing with this intercalation necessitated giving up the *lunar* calendar itself and, consequently, accepting the *solar* calendar in its place, was lost sight of. The measure implied in the two verses of the sacred Book was implemented only in part, and soon this half-measure became sacred.

One must also keep in mind the innumerable other and seemingly more weighty problems which arose in the years immediately following the death of the Prophet. Where was the opportunity for the great Omar, or the learned Ali, to attend to the intricacies of calendar reform among the mass of illiterate, half-baked, hordes of Muslims who had flocked to the standard of the great leader? Keeping order among them after their having acquired a taste for wealth was all that even Omar could do. And by the time Ali, too, passed away, the purely lunar Hijri calendar had acquired the prestige and sacredness of a religious injunction. Even a suggestion against its inadequacy was sacrilege.

But be its origin what it may, let us

see what advantages the Muslims claim for this purely lunar reckoning.

Looked at from one point of view this simple pattern had and still has many advantages. The chief advantage, for example, is that while all other calendars have been amended some time or other during the last 1300 years, the Hijri calendar has remained unaltered, for the simple reason that it did not lend itself to change. Such constancy, possible in no other means of calculation, is of great value to historians.

Another advantage of the purely lunar calendar is that it frees its followers, at least to a large extent, from the bonds of geography and climate. The two factors of climate and geography have always exercised so much influence on the mind of man that for many millenniums and even now the viewpoints of human groups have been circumscribed, making it impossible for them to regard mankind as a single family. The lunar calendar provides for a side-stepping from all issues involved in differences of longitude and latitude. It is this advantage which has sustained it throughout the centuries and which promises to sustain it for many more.

But these advantages, though real in a sense, do not, I am afraid, outweigh the disadvantages. Man, being a part of Nature, cannot in any real sense, be oblivious of his environment. In proportion to his doing so, he makes his life artificial and bare. His festivals lack the climatic associations which make those of others joyous. The *Hajj*, for example, involves the sacrifice of many animals; but, corresponding as it does now, with successive seasons, it sometimes entails their slaughter in the breeding season. The dis-

location of popular festivals is serious. The marriage seasons, according to the lunar calendar, often correspond with the rains, when festivities are damped by the monsoon. Fasts are distinctly healthy in the hot season when we need to eat less: but *Ramazan* revolves round the seasons and one has therefore to fast sometimes in winter when our bodies need more heat—sometimes in the rainy season, when digestion tends to be upset by the slightest change in diet routine.

Instead of uniting mankind into one, the lunar calendar serves to separate its followers from the rest of the world. No accommodation, for example, can be effected between the 'Ids of Islam and the seasonal festivals celebrated by the rest of mankind in spring and autumn. *Moharram* sometimes collides with *Holi* and sometimes with *Dasserah*. The 'Id-ul-Fitr is sometimes celebrated in Delhi on one day, in Bengal the next day and in Hyderabad on the day preceding. The Muslim world, following this calendar, and lying between the typical west and the typical east, constitutes a vast expanse of humanity relatively impervious to assimilation and change and therefore unable to bring together what lies on either side.

To the real student of history the lunar calendar is often very annoying. For when an event is narrated according to Hijri dates the reader gets no idea of the season then prevailing and hence cannot formulate a clear picture of the situation. The whole of Muslim history thus acquires a vagueness wherein one merely sees figures moving against a colorless background. The generally persisting difference of one or two days in the dates is extremely irritating to one who aims

at exactitude and accuracy. It is obvious that places with different longitudes and latitudes will often not agree in regard to the exact date when a new month commences, and that the lunar dates of any period of history, when the beginnings of lunar months were based upon the moon being actually *seen*, can never be taken as accurate.

AND FINALLY, A LOCAL CALENDAR

In my own state of Hyderabad, there is also a local calendar called the *Fasli*. It has its own era, its own New Year, its own date for inserting the leap-year day, and its own assortment of 30-day and 31-day months. Otherwise it has been brought into reasonable conformity with the Gregorian system. People say, "Yes, there is neither logic nor tradition nor uniqueness in the *Fasli* calendar, but all departments of our government have got into the habit of thinking in terms of the *Fasli* months and years: so any change would be unwelcome." There is such a thing as habit, which combined with social inertia, makes men cling to their handicaps, however heavy.

It is strange how the different characteristics of our four calendars—Hindu, Christian, Muslim and *Fasli*—depict the minds of the people among whom they prevail. The Hindu calendars are characteristic of the philosophical Hindu temperament, its hair-splitting subtleties, its supreme indifference to practical difficulties, its infinite soaring towards the absolute and its utter neglect of the common man. The Christian calendar, on the other hand, ignores the rocks of stupidity imbedded in its structure with a smugness equal to that which Christendom displays towards certain animistic beliefs. It does

not matter to the Christian, be he European, Indian or American, whether his New Year corresponds to a change in the solar system, as long as it commences at the same time throughout Christendom. He is reluctant to return the one extra day from August to February simply because it does not make much difference from a practical point of view. It is pragmatism he aims at and not logic. The calendar to the Christian is a means not an end.

Likewise the Hijri calendar is characteristic of the Muslim mind wherein orthodoxy rules supreme. As long as he believes that he is obeying the word of God it never occurs to the Muslim that he is perhaps misunderstanding it. The days of the early Caliphs are to him the golden age when ancient empires crumbled before the moral force of Islam. He does not stop to think that the age presented problems peculiar to a phase of human culture which no longer prevails. He tries to justify, through rationalization, even diametrically opposite tendencies that have existed during different periods of Islamic history. Deduction and not induction is still the sole basis of his logic. The reaction of some Muslims to the simple synchronization now taking place in the Fasli calendar is also illustrative of the same spirit of conservatism at any cost. Right or wrong, straight or crooked, ancient or recent, anything which is associated with his culture is to the Muslim equally sacred. Perhaps it is these differences in Christian, Hindu and Muslim attitudes of thought which make human life interesting. For if there were no such differences, life would be monotonously the same.

But if you look at all calendars to-

gether you will also see that they are like rivers flowing through time. If you analyze their contents you will find elements which they have carried down from various eras in man's history. Mixed up in their waters are sands even of different regions and here and there floating on the surfaces are found coffins of human efforts and corpses of royal vanities.

Like rivers again, calendars have often played an integral part in the development of individual cultures. Just as the civilization of Egypt is closely bound up with the inundations of the Nile, the purely lunar calendar of the Muslims has given them the unique characteristic of being oblivious of the seasons.

A third point of similarity between calendars and rivers is that it is not easy to change their course, much less to stop their flow. The slow momentum behind each calendar, based upon the mass of people following it and the time through which it has flowed, makes it irresistible and unchangeable by any generation unless it happens to be particularly virile. Fifty years of Europe may bring in more change than a cycle of Cathay but twenty centuries of that continent have not been able to give back to February the one day it needs to bring it into line with the others.

Nevertheless, if one tries to take an inventory* of the numerous calendars

*Historians have identified more than 1,000 different calendars. Of these, 100 stem from ancient Greece. One writer suggests: "The original sources of the calendar cannot be less numerous than the communities within which man was organized. In the long ago these communities were widely separated, each from the others. There was intercommunication, but it was slow and difficult. Each organized society, however small, had to depend largely on itself and its own institutions."

which have existed among different peoples one finds that, like innumerable little rivers, many calendars have lost themselves in the sands of time. Each civilization, each dynasty, each people had some sort of calendar which ran out with the passing of its respective human organization. Even the Jelali calendar, associated with the genius of Omar Khayyam, and supposed to be based on the most accurate measurement of the solar year, is today no more than an event preserved in the museum of human history.

But this multiplicity of calendars was chiefly the outcome of isolation. Printing, we must remember, was introduced into India only two hundred years ago. Before that, and even until recently when the radio has made a single world calendar indispensable, there was neither a need nor a possibility of having a uniform calendar. Every people, culturally separated from the rest, had necessarily to have their own calendar and each made one according to its own genius.

But the radio and the airplane have changed all that. Co-ordination not only in the year, the month and the date but also in the time, correct to the minute and the second, is now possible. That is why the proposed calendar reform for introducing a sensible and acceptable calendar throughout the world does not now seem far-fetched or unnecessary. It is bound to come in spite of all the opposition it is likely to meet from conservatively minded peoples among Christians, Muslims and Hindus and a thousand others. They will be as helpless in preventing it as in preventing the coming of the radio itself.

With this new international calendar we shall still have the twelve months as ordained by God from the beginning of time on our planet. The number of days in each month, however, will be more uniform and there will be a closer correspondence between the dates of the month and the days of the week. The only addition which I would make to the proposals of The World Calendar Association would be that they base their New Year also on a more rational basis.

In closing, I apologize for the boldness of some of my assertions. At any other time of human history, such seeming heresies would have been punished with more than verbal criticism. But today, we, along with the rest of the world, are at the brink of a precipice. We either speak out our minds and lay ourselves open to misunderstanding and misrepresentation or go down the brink. I shall be satisfied if I have evoked a little doubt and a little misgiving—for these alone are the precursors of thought and action and progress. I leave my readers with a verse from one of the earlier suras of the Koran delivered when the luni-solar calendar was in vogue:

It is He who hath appointed
The Sun for brightness
And the Moon for light
And hath ordained their stations
That ye may learn the number of years
And the reckoning of time;
God hath not created all this
But to manifest eternal truth
He maketh His signs clear
To those who understand.
Verily, in the alternations of night and day
And in all that God hath created,
In the Heavens and in the Earth,
Are signs
For those who pay heed.

WHY THE WORLD NEEDS THIS REFORM

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(Translation by Alice B. Connolly)

SINCE the beginning of this century, the faults of the prevailing calendar have become more and more pressing. The irregularities and deficiencies of the current system were causing numerous and serious inconveniences, and were obviously responsible for a considerable waste of time and money. Business men, scientists, educators and religious leaders began to clamor for a revision. The earliest pressures came from organizations like the International Chamber of Commerce and the International Astronomical Union. Statesmen like Lord Desborough of England and churchmen like Cardinal Mercier and the Archbishop of Canterbury urged action, first on the Swiss Government (about 1910), and later upon the League of Nations.

The argument they presented was that among the numerous reforms—moral, judicial, fiscal and political—which were a necessity in the brave new world that came into existence with the turn of the century, this reform of the calendar was by no means the least urgent.

Only gradually did governments accept their argument. People even in high places argued “Isn’t the calendar good enough as it is?” A French critic of Cardinal Mercier said, “Let’s leave well enough alone. We get our calendar worked out at the beginning of each year and find in it all the information we need.

What could be more simple? Why create difficulties where none exist at present?”

But this was a position which could hardly be maintained persistently by any thoughtful person. The situation is not so simple as to be dismissed with a mere gesture. Habit makes us think that the calendar is adequate for our purposes—but if we look at it more closely, we see that it is full of complications and disadvantages. A noted biologist, speaking the language of science, calls it “a little monster,” and justifies his use of the term by referring to the dictionary definition of monster as “any organized form of life greatly malformed by the lack, excess, misplacement or distortion of parts or organs, and thus made up of inconsistent parts or characters.”

When the League of Nations took up calendar reform, its officials were immediately bombarded with more than 500 different plans for revision, including everything from decimal systems to proposals which entirely eliminated the week. The League, after many years of meticulous study and consultation, retained only one of the 500 plans—the one now known as The World Calendar.

The United Nations has accepted the preparatory work which was so thoroughly accomplished by its predecessor. It proposes to go on from that point, and the problems of enactment have already

received consideration in meetings at Lake Success, Geneva, and at the new headquarters in New York City. The next step will be taken at the Geneva sessions in the summer of 1954.

From the reports of the League and the UN, one gets an astonishingly broad horizon-view of the world's calendar problems. First of all, one is led to realize that the Gregorian calendar is not the only system in current use. Mohammedans and Israelites have calendars of their own, and India has so many that the mere tabulation of them would require a bulky volume. Each of these systems reckons time after its own fashion. In Palestine, this is the year 5714; in Moslem countries it is 1373; in Japan it is 2613. There is no agreement as to when the year begins; there is even some difference of opinion as to when the day begins.

Astronomers, who are particularly competent in the field of time, have such a small opinion of the Gregorian calendar that they count their days from 1 January 4713 B.C., numbering them in an endless arithmetical series without regard for weeks, months or years.

Our system of time measurement has no claim to prestige except its ancient origins. It comes to us from Egypt and Rome, and has already celebrated its 2,000th birthday. Historical writers sometimes call it the "Christian" calendar, but it has nothing Christian about it except for the slight corrections made by Pope Gregory XIII. Actually it is a pagan system, as testified by the names given to months and weekdays. Some of its irregularities are the result of arbitrary and capricious acts of individuals such as Julius Caesar and Augustus.

The division of the year into weeks is

a mystery of ancient origin. The astronomers of Chaldea were really astrologers, and they created the seven-day period of time for reasons which cannot now be very clearly determined. It has survived because it meets certain human needs and conveniences. But, unfortunately, it fits badly into a solar year. There are 52 weeks in a year. But 52 times 7—it makes only 364 days, and the remainder—one supplementary day, or two in leap years—is very embarrassing. Here is the stumbling block in our present calendar.

The correct way of handling this supplementary day was pointed out about 1834 by a learned Roman priest, the Abbé Marco Mastrofini, in a 314-page book whose publication was duly approved by the ecclesiastical authorities. Since that time, every worth-while project for calendar reform has embodied the Abbé's proposal for removing the weekday designation of the last day of the year and for dealing similarly with the extra day of leap year.

Since 1931, leadership in the calendar reform movement has centered in The World Calendar Association, which has its main offices in New York City and branches in most important countries in the world. For many years it acted in a consultative and advisory capacity with the League of Nations. When the second World War put the League out of existence, The World Calendar Association weathered the storm. In due course it presented its plan to the United Nations, which recognized that this proposal had simplicity, clarity and moderation.

The revised calendar, now on the way to enactment, does not propose any enormous upheaval. It retains the present division of the year in 12 months and 52

weeks of seven days each. But it introduces order into this arrangement.

In The World Calendar, the supplementary days are the only important innovation. The 365th day of the solar year is intercalated between the end of December and the beginning of January. It becomes a world holiday. (In leap years the 366th day of the solar year is placed at the end of June.)

The proposed reform is simple, clear and eminently practical. It brings unquestionable benefits to industry, labor, transportation, science and education, thanks to its equalized periods which are permanently stabilized and made strictly comparable for statistics, evaluation and forecasting. Its benefits include substantial savings of time, labor and money—the stoppage of wastes which are uselessly thrown to the wind at present.

It would seem that we need but to explain The World Calendar to have it adopted enthusiastically, so great is the progress that it will allow the world to realize. What then is the obstacle, and why the delay? So far as the present writer can determine, the only serious difficulty thus far has been inertia. The nature of mankind makes it difficult to move in matters of this kind. I have met people who have said to me, "There must be some serious objection to this reform, or it would have been adopted long ago." I have given considerable study to their comment. I have found that the proposals have at no time met with any clear or determined opposition. Even religious leaders, who are by nature conservative, have almost uniformly favored it. The Catholic Church has provided some of its ablest supporters, and the Vatican has officially declared that it finds no dog-

matic objection or difficulty to the revision of the *civil calendar*. The same attitude is held by Moslem leaders, and currently the strongest support for calendar reform comes from India, where multiple religious calendars are a continuous difficulty.

After surveying the whole field, I find that historically the only serious objections have been based on habit, laziness of mind, fear of change and even occasionally a rather curious nationalism.

In my opinion, one of the supreme benefits to come from adoption of the revised calendar is the gift of a Worldsday dedicated to peace. This 365th day, Worldsday, uniquely isolated from the rest of the year, will become an occasion on which all nations, free from prejudice, will unite in the celebration of a feast of peace. In leap year the second supplementary day, endowed with all the characteristics of the first, will permit of an even more impressive observance.

We have here no unrealizable aspiration, no unattainable goal. I see a precedent in the way all governments succeeded in adopting the Universal Postal Union, a marvelous institution which assures you that the letter you put in the mailbox—wherever in the world you may be—will reach its destination, no matter how distant. But adoption of a revised calendar is singularly easier than was the creation of a Universal Postal Union. You will see that, once the United Nations declares itself for the new calendar, its enactment will come about without delay or difficulty. The considerable practical advantages of the change will be made clear to peoples everywhere, and an important step will have been taken toward unity and world peace.

SIGNIFICANCE OF WORLDSDAY

By Elisabeth Achelis

(A New Year's Message sent 1 January 1954)

AT this festive holiday season when the spirit of good will to men prevails, I am moved to stress the need for a greater unity among mankind. Good will to men and peace on earth belong to the entire world.

As the Ten Commandments are the moral code for mankind, so is the Christmas message universal. It reaffirms the unassailible truth that every man, woman and child is of God. One of the ancient prophets said, "Have we not all one father? Has not one God created us?"

There is a deep significance then to a universal day which peoples of all creeds, nations and climes can observe and enjoy in happy unison. This is achieved in The World Calendar by the new world holiday, Worldsdays, the 365th and last day of the year; it is the new "humanity day" of peace, good will and cooperation, a day to be observed by all peoples and all religions.

In this way, the Jewish Sabbath of rest and worship still remains the seventh day of the week and, in addition, becomes the *seventh* day of every new year. The Christian day of worship and praise is still Sunday, the first day of the week, and the Moslem Friday is still the sixth day of the week, both being observed on their respective *first* and *sixth* days of every new year. Thus these days are enriched by their rightful places in the year as well as in the week. The week of seven days remains unchanged in arrangement—the same unaltered familiar time-period, marking off a day dedicated to the spiritual in life.

It was a humble Roman Catholic priest in the early nineteenth century who with divine guidance conceived the 365th day as an annual closing day between two weeks, without a weekday name. Thus the old year was to be sealed as a complete unit of time and every new year was to begin on the logical first day of the week, Sunday, with Monday the first working day.

Stabilization of the calendar is a reform which is required by increased scientific knowledge, improved communications and the interchange of activities throughout the world. Clock time was stabilized toward the end of the nineteenth century when standard time became universal. Since then the same kind of reform in the calendar has become more and more urgent.

The World Calendar is the inevitable answer to that urgency. In arrangement it gives equal recognition to the seasons, the months, the weeks and the days. The four quarters are equalized, the months are arranged in a rhythmic harmonious pattern. Weeks and months come together at the end of each quarter, and all the time-units are balanced at the close of every year.

The calendar is like the human body, composed of many parts all forming a harmonious whole. No one member is emphasized above others and if any overemphasis exists or schism develops within the body, it becomes maladjusted and discomfort is experienced. Likewise the calendar is composed of different time-units. If any one unit, such as the day or week, is given priority, the calendar too becomes unbalanced, and discord and disagreement develop.

I am confident that such adjustments, as are necessary to establish The World Calendar, will be made with a spirit of peace, good will and cooperation. In this spirit the calendar will become a balanced and orderly time-system and everyone will benefit.

To one and all a sincere wish that the coming years will bring increased peace and happiness, upheld and advanced with the use of the stabilized and equalized World Calendar and the universal holidays—Worldsdays and Leap-year Day.

LONDON CALLING

By Harold Watkins

*This is the text of a radio address delivered on 12 March 1954 by the Press Officer of the British Section of The World Calendar Association, over the facilities of the British Broadcasting Corporation, on the occasion of the publication of Mr. Watkins' book on calendar reform, titled *Time Counts*. The book is published in England by Neville-Spearman, in America by the Philosophical Library.*

IN a way, the complicated calendar question is a handicap to the friendship of nations comparable with the language barrier. For counting the passing days and months with different systems is not unlike speaking with different tongues.

It is obvious that a new and universal calendar cannot be introduced usefully unless it is adopted everywhere at the same time, and therein lies the great difficulty. One country cannot go it alone. Only by action through such a body as the United Nations is it possible for calendar reform to take place.

Thus the recent action of the India Government in placing the subject on the agenda of the U.N. Economic and Social Council (meeting at Geneva in July) is vastly important. As an eminent citizen of Delhi pointed out, "India is today using more than 30 different calendars: our situation is chaotic and intolerable." A government committee has gone thoroughly into the subject and the result is that India is now making a formal demand for the adoption of The World Calendar through the United Nations. If this proceeding on the part of the India Government leads at last to the uni-

versal adoption of an improved calendar, all the world will benefit.

In my book I have tried to fill in some of the background of the calendar reform movement, and to bring the subject up to date. There is good reason for my effort, because modern conditions call for such a reform. The growth of commerce and communications, especially over the past decade, has brought out the defects of our present Western calendar and accentuated the demand for revision.

Efforts to improve the calendar have been continuous throughout history. The most famous of the early attempts was that of Julius Caesar. When he became head of the Roman Empire, he found the ancient calendar in a chaotic condition. The decemvirs, who were assigned to take care of it, had failed in their duty: they had adjusted the lengths of months to suit their own purposes, until the seasonal feasts and holidays were completely out of step with the sun. Caesar took the matter firmly in hand and with the aid of competent astronomers, instituted the Julian calendar, dividing the year into 12 months, each with a definite number of days—and inaugurating a regular leap year every four years, with an extra

day to adjust the year's length accurately.

This Julian calendar became the official system of time measurement wherever the Roman Empire reached. It has been said that it had a share in making the Roman Empire possible, for it had an important influence on communications.

In many important features it differed from earlier calendars. For example, it parted completely from the tendency to use the moon as a measure of time: instead, it employed the sun exclusively. Also, it specified precisely the number of days in each month. And perhaps its most novel feature was the leap year.

Julius was not the first one to think of a leap year. The same idea had been suggested in Egypt some centuries before, but the priests were against it and the notion had to be dropped. Under the Roman system it became permanent and had the opportunity to prove its worth.

Meanwhile, in other parts of the ancient world, China and the Asiatic countries were experimenting with their own calendars, and every little while there were changes based on added astronomical knowledge. India gave much attention to the subject and invented many intricate time systems. She still has many of them surviving today, variants of ancient calendars.

In the far-off Americas the Mayans, Incas and Aztecs devised their own methods of keeping time, marvels of accuracy which are still being studied by archeologists.

As the Roman Empire crumbled, Caesar's calendar survived. But in one area there was a remarkable development, with a profoundly disturbing influence on

the world's time reckoning. This was the re-adooption of a strictly lunar calendar by the followers of Mahomet in the seventh century. The year 622 A.D. became the beginning of their calendar era, being the year of the Prophet's Hejira, and therefore the start of the Hijra calendar. The Moslem year, used now by 300,000,000 people, has a length of 354 days as compared with the 365 days of the normal year in the solar calendar.

Even the excellent Julian calendar was not quite correct, astronomically, since the solar year is not precisely 365 $\frac{1}{4}$ days long, but 365 days, 5 hours, 48 minutes and 46 seconds. Over the centuries this small error caused the calendar to go wrong with the seasons, and a correction was made by Pope Gregory in 1582, which involved dropping ten days.

There were other defects which Gregory did not correct. His revision still left the months with their irregular number of days in irregular order. Seven of our months have 31 days, four have 30 days, and one of them, February, may have either 28 or 29 days. The result of this hodgepodge is that our quarterly and half-yearly periods are annoyingly irregular, creating unnecessary difficulties for statisticians, accountants, business men, and everybody who uses periodic figures for comparisons.

Between 1923 and 1937 the League of Nations went deeply into the subject of calendar revision and considered all possible solutions. Ultimately it decided that there was only one reasonable answer, the perpetual World Calendar of equal quarters.

MEMO FROM THE UNITED NATIONS

A Radio Program Prepared by the U.N. Radio, 24 March 1954; Written and Narrated by Cecil Lewis; Produced by J. Donald Pringle; Featuring Miss Elisabeth Achelis (President The World Calendar Association), Dr. Clarence Decker (Ex-President University of Kansas City), Rajeshwar Dayal (Permanent Delegate of India to the U.N.)

ANNOUNCER: *Memo from the United Nations*—a report from the United Nations to you. Dated from Headquarters; prepared by the International Staff of U.N. Radio, setting out the story of many people in many places who are busy today with the world's job.

LEWIS: Thirty days hath September, April, June and November; all the rest have 31, except February which has 28 days clear—and 29 in each leap year.

This little rhyme—the only way many people can remember how many days there are in the various months—would be literally out of date if India's proposal for a World Calendar is adopted. India is soon to bring this question before the Economic and Social Council at U.N. Headquarters. And so today our program is about calendars—past, present and future.

A dry subject? Not at all—a fascinating one, and an extremely personal one too, for a change in the calendar would affect the lives of almost every living being on earth. We of the West have the Gregorian calendar, and we get along fairly well with it. But in India, for instance, there are 30 different calendars, used in various parts of the country. How would you compile, say, a railway timetable on that basis?

The suggestion is that one constant, uniform calendar would be of great use in the world of today. It would simplify a great many national and international dealings. Our present Western calendar is already a mass of inconsistencies, according to Miss Elisabeth Achelis, the President of The World Calendar Association.

ACHELIS: The year is divided into months, quarters and half-years. Are these time units exact? Are the months regular in length, like the hours on a clock? Are the quarter-years and half-years? They are not. The months vary in length from 28 days to 31 days; the quarters may be either 90, 91 or 92 days; the first half year is 181 days long, the second half is 184 days long.

There is another defect of the calendar which is annoying to everybody. I refer to our wandering weekdays. Any given day of the month—say New Year's Day or Christmas, or your birthday—comes on different weekdays in successive years. This is because there are not an integral number of weeks in a 365-day year. There are 52 weeks plus one or two days in each year.

LEWIS: Let's go back a bit and see how all these inconsistencies came about. Nobody can say what time is. The best definition, perhaps, is one made by a poet. He called it "a perpetual perishing." It's a merciless one-way street, up which we can only reverse in memory. . . . But since prehistoric days, men have sought to

measure time's passage. The Borneo tribesmen pegged the shadow from a totem pole. When the shadow passed its longest point, they knew it was time to think about planting crops.

The Druids, the Chinese, the Incas, the Egyptians, all had extremely accurate methods of determining the exact moment at which the earth completed its orbit round the sun. On only one day each year did the sun, lined up along two stones, fall exactly on the marked spot on the altar. When it did so, the New Year had begun.

Dr. Clarence Decker, ex-President of the University of Kansas City and a firm champion of the new World Calendar, reminds us:

DECKER: If we look back to the beginnings of human civilization, we find that man's first organized intellectual achievement was the making of a calendar. Even the cave man felt the need for some system of recording the days, of wrapping them up into convenient bundles.

Everybody, of course, knows the story of Robinson Crusoe, who was shipwrecked on a desert island, and how one of his first tasks was to devise a method whereby he could keep account of the passing days. Lacking pen and ink, he planted a stout pole in the ground. Each day he carved a small notch in the pole. And as the notches mounted, he marked the weeks with a longer notch every seventh day.

LEWIS: And we must remember that when Robinson Crusoe did find a companion, he knew—thanks to his simple calendar—that the stranger turned up on the day after Thursday—and he called him "Man Friday". . . . But we still haven't come to grips with the difficulty of constructing a calendar.

PRINGLE: There are really two distinct measurements of time. The first is based on the rotation of the earth. That's simple and constant. Every revolution—a day and a night—we have divided into 24 parts called hours, each of which is again divided into 60 minutes, and each minute itself into 60 seconds. That works, and will continue to work until the earth's spin gets slower or faster.

But the second movement we try to measure—that is, the time taken for the earth to complete one circle or orbit, around the sun—is the real difficulty. Because it doesn't mesh with the earth's rotation. That is, the year isn't an exact number of days, but is precisely 365 days, 5 hours, 48 minutes and 45.51 seconds.

LEWIS: And those odd hours, minutes and seconds are the cause of all the calendrical headaches—headaches that have been going on for quite some time. . . . There is a calendar—probably the oldest in the world—on Lake Titicaca in the Andes, which can only be deciphered on the supposition that in those days there were only 285 days in each year and the moon was whizzing around the earth every ten days. This probably belongs to some remote period before the flood.

Then there is the extraordinarily complicated Aztec calendar, originally inscribed on a gold plate five feet across. . . . Another ancient calendar was the Signs of the Zodiac, an imaginary belt in the skies through which the sun passed each month. It was all right 2,000 years ago, but the starry constellations, after which each sign was named, have all shifted today. Dr. Decker says:

DECKER: Since man graduated from barbarism, there have been thousands of calendars. There are still a good many different types being used throughout the world even today—not only the familiar Gregorian or Western, but also the Jewish and Moslem calendars, among others.

Recently when I was in the Near East and in the Far East, I saw this Jewish calendar in use as the official system in the new state of Israel; and the rather complicated Moslem calendar which rules the life of 300 million Arabs and other followers of Mohammed. And when I was in India I marvelled at the multiplicity of calendars which are used in various parts of that vast sub-continent. I was told that more than 30 completely variant types of time measurement are current there—and this fact undoubtedly accounts for Prime Minister Nehru's present interest in unifying the Indian calendars as part of an international movement for calendar reform.

I have discussed the history and evolution of the calendar with a great many people in many parts of the world. It is not just a mathematical formula or a cold scientific prescription: it is a product of human ingenuity, and in creating it men have mixed together such strange components as science and superstition, wisdom and romance, religion and mythology, mathematics and witchcraft, compromise and prejudice. It has gone through many changes and improvements. And it is not yet perfect.

LEWIS: It was Julius Caesar who got the calendar more or less taped—365 days every year and a day extra every four years for leap year. This went all right for a few hundred years, but then the Biblical idea of a "week" came up. Miss Achelis takes up the story:

ACHELIS: The old Roman calendar, as Julius set it up, was perpetual. That is, every year was exactly alike. The division of the months by means of the Ides, Nones and Kalends went on year after year, in exactly the same way. But when the Christian weekdays were substituted for the Roman Ides, Nones and Kalends, nobody thought about finding some way to square the weeks with the 365-day year.

LEWIS: Julius Caesar had, as we remember, some trouble with the Ides of March. . . . But those odd hours and minutes we spoke of kept piling up at the rate of 19 hours every century, so that in 1,500 years the calendar was about 10 days behind schedule. Pope Gregory put that right in 1582 by a simple decree. He just dropped ten days out of the calendar and started again. . . . That's how we got our present calendar. As you can see, it's the result of rule-of-thumb methods.

And now, what of the new proposal for a World Calendar? It is, as we said at the outset, being put forward by India. Mr. Rajeshwar Dayal, India's Permanent Delegate to the United Nations, came to our studios to speak about it.

DAYAL: It is appropriate that the World Organization should deal with this question, for there could hardly be anything more *universal* than this problem of calendar reform, which concerns itself with man's attempts to measure the passage of the days and nights, the months and years.

The drawbacks of the present Gregorian calendar are well known, and I need not repeat them here. On the other hand, The World Calendar which has been put

forward by my delegation, is scientific, stable and constant. It would apply equally to the requirements of every section of society—to government, industry, labor, transportation, education and so on.

In the new calendar every year would have the same arrangement of days and months, and the duration of the quarters would be identical: that is, 91 days or 13 weeks. Each month would have 26 weekdays, plus Sundays. Each year would begin on Sunday, the first of January. If adopted it would mean that all statistics compiled on the basis of a month, quarter or year would be strictly comparable. Also we would not need to print calendars every year.

So much for the scientific advantages. The 365th day of the year in this calendar is proposed as an international holiday, to be designated not by any weekday name but by the special name of Worldsday. This day would be dedicated in each country of the world to the promotion of international understanding and harmony. The celebration of this day should do something towards knitting all races, creeds and nations into a closer bond of fellowship, creating the feeling of citizenship in One World.

LEWIS: The proposed calendar has, as you see, many obvious advantages. What are the chances of its adoption? There is nothing to prevent it—except our ingrained resistance to change. The fact is, we have got used to the present inconsistencies and we resist standardization in the way we have resisted the decimal system or a world language.

Those born on 31 March would have to resign themselves, under the new calendar, to losing their birthday forever—for that day doesn't exist in the new calendar. They, like Humpty Dumpty, would have to say, "It was given me for an un-birthday present."

Finally, we may ask why India is bringing forward the proposal now? Mr. Dayal answers:

DAYAL: My delegation has put forward this proposal *now* because the only feasible time for adopting the new calendar is a year when both the old and new calendars coincide, and a changeover becomes possible with a minimum of disturbance. This will happen on Sunday the first of January, 1956, which gives us just under two years to prepare for this significant and historic reform.

Our proposal will not adversely affect the religious calendars of any sect, for they would always be at liberty to follow their own religious calendars. The World Calendar is for international use, and also for the civil and administrative purposes of all the nations of the world.

LEWIS: We live in a rational age, in which a great effort is being made to achieve common standards throughout the world, and The World Calendar is a logical extension of this idea—to work out a simple universal method to measure the relentless passage of the days of our years.

ANNOUNCER: *Memo from the United Nations* comes to you weekly from the International Staff of U.N. Radio in New York.

COMMENT ON INDIA'S ACTION

Nehru's Attitude Interpreted

(London Daily Express)

INDIA'S Premier Nehru, whose birthday sign is Scorpio, wants the United Nations to help him confound his country's astrologers by giving the world a new calendar.

Despite objections by Britain and America, whose attitude is one of polite bewilderment, he has succeeded in getting his proposal up for discussion by the busy Economic and Social Council when it meets at Geneva in July. Mr. Nehru has told his delegates to make this a matter of priority. Apparently Russia will support him.

Nehru's preoccupation with calendar reform springs from a tidy mind that dislikes the inconsistencies of our present calendar. He also wants to clear up the confusion of India's own 30 different kinds of calendars, ranging from the Moslem lunar system to one for almost every Hindu sect, and to put a real damper on the horoscope industry.

Though he started his own Calendar Reform Committee a year ago, he owes his inspiration to an American lady who heads The World Calendar Association. Her idea, which Nehru wants the world to adopt, is a year with four equal quarters each containing 91 days. The 365th day, 31 December, which we have to have to keep even with the sun, will have a new name, Worldsday, and will be a universal holiday.

Reform on World Basis

(Chicago Tribune)

A NEW fight between the United States and India, this one over world calendar reform, is brewing in the United Nations. The Indian calendar proposal would provide one world holiday—Worldsday—each year, and two in leap years.

The fight promises to come to a head next month when India wants the U.N. Economic and Social Council to make cal-

endar reform a major item of business for its summer session in Geneva. The United States has opposed taking up the question on the ground that the Council has more important things to do.

If the Indians get their new 364-day calendar adopted by the 18-nation Economic and Social Council and the 60-nation General Assembly, they hope to have it go into effect 1 January, 1956.

The calendar reform sought by the India delegation is backed by The World Calendar Association, whose headquarters are in New York. Calendar fights are not new. The old League of Nations considered about 500 proposed reforms. About 100 have come before the U.N. since 1945.

India's presentation to the U.N. points out that the present calendar is a hodge-podge of 28, 29, 30 and 31 day months, a situation they propose to correct.

India says its proposed calendar will be "more regular, scientific and advantageous from every point of view than the present Gregorian system adopted in the 16th century." The India delegation insists calendar reform is urgent, and they are lining up opposition to any United States move for delay.

India Ready for a Change

(Madras Times)

OUR country has a bewildering variety of calendars, used in various regions for administrative and religious purposes, some lunar, some solar, some luni-solar—the latter with religious holidays determined by a lunar calendar pegged onto a solar calendar. Some of these have eras different from others, while some have no eras at all.

At the moment in India there are more than 30 calendars. In Benares alone there are four, and it is common to find important Hindu festivals like Ganesh Chathurthi and Saraswathi Puja being celebrated on different days in different parts of the country

or even in the same city—as happened this year in Calcutta.

To do away with such anomalies and confusion, a bill will be brought before Parliament soon. Because there is a good deal of dissatisfaction with the now universally used Gregorian calendar, India has submitted a project to the United Nations suggesting a new uniform calendar for the whole world.

Political circles in the capital and leaders in various parts of the country have from time to time suggested that our new National Calendar should be named after the Father of the Nation in commemoration of his attainments and his supreme sacrifice for the cause of the country and the doctrine of non-violence.

International Common Sense

(The Statesman, Delhi)

WITH many things in the contemporary world crying for reform, it might seem to the casual observer that reforming the calendar should have comparatively low priority. That conclusion would perhaps be shortsighted.

Even the Gregorian calendar, in most general use over the globe, has marked defects, not merely theoretical but practical. The number of working days and holidays varies not merely week by week and month by month, but even year by year, creating commercial complications of a ramifying kind (estimates of exports and trade balances, for instance) and parallel problems of accountancy, such as "adjusted" averages, with much waste of effort and expense.

Yet the Gregorian calendar is by no means alone concerned, or even in a particular area necessarily the most important. In India, no less than 30 systems of dating compete for public favor.

It was not necessarily to be expected, but is gratifying to observe, that official India is a pioneer in the movement for reform. She has been the latest to sponsor before the U.N. a re-organization of the Gregorian system, a revision so sensible and simple

that, but for World War II, it might already have been undertaken under the auspices of the League of Nations.

This, by the simple process of making one day a year (or in leap years two) what the Romans called "inter-calary" (not reckoned as part of the normal numbering), allows complete repetition every quarter of a 31,30,30 month system with 26 working days in each, and many other commercial and social advantages. It does so without renaming part of November "Brumaire," as the French revolutionaries did, or indulging in other extravagances such as eccentric names for the days of the week, or a bogus week such as the Russian revolutionaries adopted.

In other words the basic idea is the work of sensible people rather than cranks—whether or not one approves of later embellishments, rather redolent of "uplift," such as calling the intercalary day "Worlds-day."

However, it remains to be seen how far sense will prevail before the next obvious deadline, which depends on the desirability of beginning each year under the new system with a Sunday, and for which the next suitable opportunity is 1956.

Meanwhile India herself is attempting to instill a little order into the chaos of her own domestic dating systems, through the medium of the Calendar Reform Committee, instituted a year ago with the cordial good wishes of the Prime Minister. Like its international counterparts, this endeavors to disarm traditional suspicion by making fully clear that it is not treading on anybody's corns. With religious bodies which derive the dates of important festivals from the variable lunar calendar there is not, of course, the faintest intention of interfering, any more than the international reformers had any such aim (though there is considerable support in Christian circles for a fixed Easter). What will come of all this remains to be seen. But all the problems seem now to have been gone into in meticulous and fairminded detail, and the whole enterprise gains an additional fillip from India's own initiative in the international sphere.

FROM THE MAIL BAG

Regarding certain religious objections to calendar revision, I don't think that Jews, even the most pious ones, will object to the addition of another praying day which will not be included in the counting of weekdays. The Worldsday would perhaps be called in Hebrew Yom Olam, and the Leapyear Day Yom Ibur.—Prof. Micha Klein, Tel Aviv, Israel.

It is important that we make calendar reform a functioning institution throughout the world. Our human society cannot expect sanity and constructive growth if it continues to shackle itself with obsolete customs and primitive thinking. We want to appreciate and utilize the achievements of the physical and biological sciences for more intelligent living; in this light, the new calendar is an indispensable necessity for wholesome and rational relationships.—H. E. Bailey, Board of Education, New York.

People in India would like to see the world follow a Universal Calendar. Religion should not have anything to do with the civil calendar. Surely it does not matter on what particular day any religious function or festival falls as long as it is not obliterated in the changeover.—D. I. Ahmadi, Bombay Municipality, India.

Recognition of The World Calendar Association by the U.N. as a non-governmental organization affiliated with its Economic and Social Council is arousing lively interest among people who have not heretofore been seriously interested. I believe calendar reform will be adopted in the near future. All those who are looking forward to a better world find in this achievement a glorious sign of progress.—G. W. Sowler, Allegan, Mich.

Introduction of The World Calendar, besides its undoubted value to business, science and everyday living, will provide an over-all unifying force in the interest of world peace. If nations can universally agree on a matter like calendar reform, there should be no limit to what they can do in

attaining world unity on broader issues.—John K. Lavett, Sydney, Australia.

In my addresses on behalf of calendar reform, I have found a short question-and-answer period advantageous. It indicates what the audience has assimilated from the talk and what they are thinking about the problem.—Commander William A. Mason, U. S. Navy (Ret.), Redondo Beach, Cal.

In correcting the present calendar, we approve the plan of The World Calendar as the most appropriate proposal.—J. Matsuo, Chief of Standards, Mitsubishi Electric Co., Amagasaki, Japan.

A world calendar would be a very great improvement in helping us to calculate the constant shifts in our time-machine.—Arthur Krock, *New York Times*.

Having worked many years in a statistical office, I realize both the material advantages and the moral values which calendar reform will bring to the whole world. All of us will be benefited, and the enactment of the new calendar will constitute a glorious achievement for humanity.—Bernardo Baideff, *Boletin Matematico*, Buenos Aires.

This is a reform which has the support and approval of scientists, scholars, churchmen and business men generally.—Brother Boniface, C.F.X., Louisville, Ky.

I quite agree that the establishment of a stabilized calendar is a present-day necessity.—Abbé Granereau, School for Priests, Lamorlaye, France.

In Italy there is a good deal of discussion about the calendar reform proposed by the United Nations.—C. Rossi, Director, Italian Standards Association, Milan.

As a strong supporter of calendar standardization, I was happy to find *The Times* giving important space to this matter.—W. F. Bushell, Birkenhead, England.

CURRENT PRESS COMMENT

Active Support in Ireland

Irish Times, Dublin

PROPOSALS for organizing an Irish committee on calendar reform were suggested at the Dublin Rotary Club, meeting in the Royal Hibernian Hotel. The guest speaker was James Avery Joyce, honorary secretary of the British World Calendar Association. He told the members about the new calendar which will be universally adopted in 1956 if representations by his organization to the United Nations prove successful.

According to Mr. Joyce, the calendar now in use is almost 2,000 years old. Since it was installed by Julius Caesar, methods of measuring time have changed greatly. The old water clock has been discarded for chronometers and scientific devices that divide time into thousandths of a second. But the calendar, except for slight modifications by Pope Gregory XIII, remains the same as in Roman times. During all the intervening period, it has been the subject of controversy.

The proposed new calendar is the result of many suggestions and years of patient research. It was first suggested by Abbot Marco Mastrofini, a Roman Catholic priest, in 1834. Seventeen governments have now given their approval.

Here's a Worthy Cause

Havre (Mont.) News

AS a subject of discussion, calendar reform has been chewed over from such mighty places as the halls of Congress to the back room of O'Hoolihan's oyster house. The debate has waxed hot and furious, with the pen and oratory equally active.

Most people will agree that the present calendar is a hodgepodge with little rhyme or reason in its make-up. Fourteen different

types of years are used. It's enough to drive anyone goofy.

There are many capricious angles to the current system, which is obviously wasteful. Coming from a person in the printing trade this may sound unusual. Actually the printing business has profited through our screwy calendar system, but we would prefer order on an international scale because it would mean less confusion all the way around. There has been talk about one world: what about one calendar—a strong one with some sense to it?

It is a fact that much time and effort are spent every year in developing new schedules for institutions, government and private business. This is large-scale waste because the schedules cannot be used or applied to the following year. Most people attempt to be as sensible as possible—why not get sensible about the calendar?

Cure for Many Headaches

Panama City (Fla.) News

REVISION of the calendar would relieve ten thousand headaches and simplify countless business transactions. The proposed reform is a perfectly practical plan. Far from being the creation of visionaries, its chief boosters are industrialists, bankers and accountants, who believe it would save substantial sums of money.

Anything which requires scheduling would benefit. Anything which involves statistical comparisons would be simplified. Florida, with its tourist business, would be specially favored, because vacation planning would be simplified and the handicap of split-week holidays would be overcome. The whole thing looks so simple that it should have been adopted long ago.

Some of the brainiest men and women in the world have been back of this proposal for a long time. Only now are they beginning to see hopes of success.

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